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**MANAGING THE SUPPLIER RISKS IN A PURCHASING
DEPARTMENT.**

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ABSTRACT

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<p>The goal of the present paper is to understand the supplier risks within a purchasing department, and find out the impact of the management in the implementation of a methodology.</p> <p>In a first place the theoretical part provides the context and the stakes that a purchasing department is confronted with when managing the risks, the evolution of this service and its central role in the management of the supplier risks. One part highlights the different risks met by a purchasing department in general, going through the macro economical risks, the financial ones, then the industrial and quality risks, to continue with the legal risks and those bound to the image and finally the human risks. The idea is to relate all possible risks to, in a third part, evoke the implementation of a methodology of risk management. At last, an integrated approach into the management process will lead to the different steps required to manage the supplier risks.</p> <p>The experiment and interview were aimed at understanding the risks at a purchasing department and above all the means to manage the supplier risks. Data for the research were collected from an entire purchasing and negotiation department of author's first internship company and the interview was done in a purchasing service of a SME.</p> <p>This study supports a clear method used by almost all companies to forecast and handle the risks, previously detailed. In addition, an example will complete the words previously mentioned.</p>		

Key words

Company, Logistics, Management, Mapping, Purchase, Risk, SME, Supplier.

ABSTRACT

CONCEPT DEFINITIONS

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1 INTRODUCTION

What does exactly the notion of risk mean? "The risk is the consideration of an exposure in a danger, a damage or other harmful event, inherent to a situation or an activity. The risk is defined by the probability of occurrence of this event and by the scale of its consequences." (Perilhon, 2007) A company, about its size or its activity, is exposed to some risks, by its market, its environment, its business connections (whether it is with suppliers, partners, competitors or customers), its business sector, its finances, etc. The stake for the company is to identify these risks and to develop adapted strategies. The management of these risks consists of a global process within the company, which allows identifying them, to analyse them, and to set up the actions to master them and even anticipate them.

In front of this problem of risk management, it is interesting to deepen a very precise category of risks: the supplier risks, that are the risks to which is subjected the company by its relations. On one hand because 2/3 of the added value of a company comes from its suppliers. On the other hand, because certain phenomena as the globalization of the economy, the opening of markets, the faster and faster technological evolutions and naturally the financial and economic crises, totally modified the relations that the companies have with their suppliers. New risks appeared and companies now become aware of the importance of the management of these to decrease the impact that can be a failure of a supplier on the activity of the company.

In the risk management process, purchases take a more important place. Their role is major in the detection of the risks and their management, even more in the case of supplier risks, because Purchases are their main interlocutors. To the extent that, in companies that do not have the means to have a "risk management" service, this role is often assigned to the Procurement team. Indeed, Purchases, by their more central and strategic position within the company, and by their knowledge of markets and suppliers, have an overview which allows them to be the best placed to understand the risk management.

1.1 The aim of the thesis

This thesis will discuss about the management of supplier risks within a purchasing department with the goal to study how it is possible to effectively handle these supplier risks and to submit an appropriate methodology for the purchasing departments.

To do so it will try to highlight the answers of these questions: what are the main supplier risks that companies have to face up? What are the encountered problems by the companies? By the SME? How to adapt a policy of “Risk Management”? How to communicate on this risk management dimension, in an internal way as with the suppliers?

1.2 Methodology used

To meet to the aim of the thesis, first a theoretical part will be presented, in order to explain and point out the important information and findings of the management of the supplier risks; books, articles, and conferences were used as references. Then the results of the researches continued the thesis, which are based on the methodology the author learnt in the negotiation and purchasing department of the company Adecco Spain where the author did an internship and on an interview made with an entire purchasing service of a Small and Medium-Sized Enterprise (SME).

2 THEORY OF SUPPLIER RISKS

Over time, the purchasing department became an increasingly important service of a company. Obviously, the risks have been also increased with the time and the department became strategic for the management of these risks. The risks are varied and vast, that's why they are classified into different categories (economic, legal, industrial and quality, image and human) to be better apprehended and detailed.

2.1 The role of a purchasing department and its impact in the management of the supplier risks

In the 1980s, the role of the purchasing department was mainly the one of supply manager (and orders). Then, in the 1990s-2000, the function has changed into a costs manager because the executive managements understood that the purchasing department could increase significantly the results of the company by the implementation of a cost savings policy. Indeed, to double the profit, several solutions are conceivable like raising the selling price by 5 %, reducing the salaries by 25 % and the overhead costs by 33%, double the turnover, and reducing the buying rate. (Perrotin, Soulet de Brugière, 2008) The role of the purchasing service into the increase of the company's profit is primordial and most of the executive managements understood it. In recent years, the purchasing function evolved towards a more recognised and more strategic place into the company, by continuing to strengthen, in terms of staff and budgets. The scope of its responsibilities widens towards the quality, the innovation and the management of the risks in particular.

With the crisis, the optimisation of the costs stays the priority of the executive managements and the purchasing managements. Nevertheless, for the purchasing departments, the crisis is not a step backward towards a strategy only based on "Cost killing". On the contrary, the crisis was finally an opportunity by accelerating the processing of the purchasing function by an extension of its scope of actions. (Purchasing Observatory, 2010) The purchasing function takes a more strategic place in the company because the executive managements understood quickly that the sustainability of the company was spent by a reassurance of the relation with the suppliers. Moreover, the purchasing department is in the best position to take these responsibilities. (APPENDIX 1) In addition, by the effect of the crisis, the control of the risks (9 % of the priorities) becomes the 4th objective of purchasing functions, even if this objective still stays below the increase of the profit (34 % of the priorities). The risk management

is a global objective and each service of the company has to be involved. However, the purchasing department is best disposed to position as the “conductor” and to strengthen its strategic position in the company. (Perrotin & Soulet de Brugière, 2008) There was a change of the purchasing function that goes from a position where it had to justify constantly its results and its added value, to a much more strategic position, in which it is “source of proposals” and contributor of solutions within the company. This crisis permitted to realize the potential of the purchasing function within the organisation, but this awareness and the handling of this strategic role require maturity that many purchasing departments still do not have. (Rivière, 2009)

The purchasing department is the one that has the privileged contacts with the suppliers. It is the interface between these suppliers and the internal customers. It confers it a strategic position in the management of the suppliers’ risks: this service is best positioned to pilot these risks. Furthermore, at the internal level, the purchasing services work more upstream, with projects with the various departments of the company (production, research & development, general management, financier...). It also confers them a position of central hub. This is important in risk management, which purchases have to communicate with all the holders of risks. The holder of the risk is the one who is in direct contact with this risk. He will be the best placed to identify it, estimate it and propose solutions of piloting of this risk. Moreover, the profile of the buyers progressed and the risk management is now an integral part of the mission. It is even directly mentioned on some profiles: “this person identifies and measures proactively any supplier risks and sets up plans to secure the supply chain, with the support of the teams dedicated to this activity.” (Perilhon, 2007)

2.2 Apprehend the different supplier risks

The supplier risks are the risks that the company is subjected to by the relation that it maintains with the suppliers. These supplier risks can be filed into 6 categories:

- The economic risks
- The legal risks
- The financial risks
- The industrial risks and quality
- The risks in term of image
- The human risks

For each category, it is important to know the different risks that the company can be subjected to but also to know to which indicators or signals they can be identified, and then, evaluated. (Hassid, 2008)

2.2.1 The macroeconomic risks

This is a Marketing-Purchase approach that consists studying the market in which has placed the supplier. The objective of this process is to characterise the market, to determine the limits and the possible strategies of the different actors, and finally to detect the factors of generative risks of imbalance of the supplier market. (Perrotin, 2007) The key indicators are the typology of the market (competitive market, monopoly, oligopoly, vicious market), the features of the offers (competition, price evolution, barriers to entry and exit the market, growth), the features of the demand (global offer capacity, weight of the company in comparison to the global demand, main competitors in purchases, presence of the leader, type of made purchases). Some questions can be asked too: Is it a market in launch, growth, stagnation or decline? Is it a cyclic market? Is it a market of agreement between actors (between suppliers)? To use these indicators, different tools are used as the strategic analysis of the 5 strengths of Porter, by considering the "customers" as the buyer company, and the matrix of the markets that schematizes the complexity of the market and allows having a vision of the level of risks bound to the market of the supplier. (Bernard & Salviac, 2009)

The emergence of the Low Cost Countries (LCC) modified considerably the strategies of the companies since about 20 years. The exploitation of these emerging countries is now a part of the strategy of the companies, to preserve their competitiveness, mainly thanks to a workforce much cheaper than in Europe. It leads also to the appearance of new risks that a purchasing department has to face, which are proper to the country of the supplier. These country risks are the following ones: the political risks, the legal risks, the economic risks, the ethical risks, and the risks bound to infrastructures. Before working with a supplier coming from these emerging countries, it is essential to study and to analyse these risks. (Barthelemy, 2004) It is not simple because the information on some countries is difficult to find and the strong cultural differences can be barriers in the search for reliable information.

The key indicators to political risks are the stability of the current regime and the constitution and an economic and monetary policy (with the regulations on the investments forced on the currencies, the level of the interest rates and the policy of quotas). In the emerging countries that saw an important growth in only a few decades, it is important to estimate the stability of the political system in position

and the political pact, to avoid risks of coup d'état for example. On the other hand, the economic policy of the concerned country, in particular in terms of currencies and interest rate, can have a not insignificant impact on purchasing terms. (Hassid, 2008)

In the case of legal risks, the key indicators are the applicable laws on industrial property, on counterfeiting and on contracts, the efficiency and maturity of the legal system and the respect for the environmental regulations. Out of a national or community legal context (as Europe), the resolution of legal disputes can very quickly become complicated, expensive and with long procedures. It is essential to study well the legal system of the concerned country, in particular the recourses in case of dispute, the laws against counterfeiting (to protect an industrial certificate for example), the laws for the environment or the laws bound in the conditions of work. (Wajnsztok, 2009) Furthermore, within the framework of contracts with suppliers coming from these countries, it will be necessary that the conditions of the contract are in adequacy with the laws of the concerned country and the clauses of the contract are enough precise and detailed; so that things are clear for the supplier. It will limit the risks of a future dispute.

At the level of economic risks, the indicators are more easily quantifiable: the growth of the Gross Domestic Product (GDP), the standard of living (GDP / inhabitant), the unemployment rate, the different taxes and the price stability and the inflation. (Perrotin & Soulet de Brugière, 2008) These factors allow to have a vision of the development of the country on the longer term and to try to set up a long-lasting relation with the suppliers.

2.2.2 The financial risks

Purchases are one of the main sources of expenses in a company. They have an important financial stake and it can be conceived by studying the Operational Working Capital Requirements. This measure is determined by making the difference between the resources of operation (outstanding discounted bills suppliers) and the jobs of operation (incur customers and stocks). (Wajnsztok, 2009) The purchasing function has a direct action on 2 elements. The outstanding discounted bills suppliers: the increase of the outstanding supplier discounted bills lead to a reduction of the Operational Working Capital Requirements. However, it is necessary to watch that this reduction in the outstanding discounted bills does not increase the fragility of the supplier and its default risk. And the level of inventory: the more the immobilized stock will be low, the more the use of liquidity will be low and the more the Opera-

tional Working Capital Requirements will be low. However, it will be necessary to watch that the reduction in this level of inventory does not entail breaks or increases of the delivery deadlines of the customers. (Barthelemy B., 2004)

Notion of balance in the risk management: The study of these exploitation risks highlights an important notion in risk management: the notion of balance. Indeed, it is necessary to be very vigilant in not only transferring a risk but to decrease it. For example, it is useless to want too much to decrease the exploitation risk by negotiating the outstanding discounted bills of a supplier if it has for consequence to increase at the same time the default risk of this supplier. In this case, the global effect is non-existent or even negative. The risk management requires a global vision and it is essential to make a regular follow-up of the actions and the results to be able to contain this kind of drift. (Hassid, 2008)

The default risks of the suppliers and their consequences: In its relation with the suppliers, the purchasing department is in the front line to analyse and pilot the financial risks that can have its suppliers. These risks can be a simple cash shortage or a loss of competitiveness due to a stop of the investments, which could go to the failure of the supplier (suspension of payments). This default risk was widely increased for two years, with the financial and economic crisis. Several companies were not solid enough and have of to stop their activity, putting in danger a lot of companies that did not know how to anticipate this phenomenon. (Hassid, 2008) Because it is obvious that the failure of a strategic supplier can have dramatic consequences in the cycle of operation of the company and have a snowball effect on the whole network. Unfortunately, this economic crisis showed that the supplier risks assessment was only too little gone deeper into and too little anticipated, in spite of the disastrous consequences that these risks can have, especially in times of crisis. Indeed, if the company did not anticipate the economic difficulties of its suppliers, by finding with their solutions and/or by setting up alternative scenarios, the consequences can be terrible. From a small stock shortage, it can lead to stops in production (for the industries) with all side effects: loss of the turnover, loss of customers, dismissals, cash-flow challenges, etc. In the worst cases, to the failure of the company. (Altarès Study, 2009-2010)

Financial analysis of the suppliers: It is essential to lead a thorough analysis of the financial health of the suppliers. However, it is clearly idealistic to believe that all companies have the human and financial means to make an analysis of all their suppliers. Most important is to focus on their strategic suppliers, those who, by definition, are strategic for the sustainability of the company. (Barthelemy, 2004) On the other hand, making a financial analysis requests skills that are rarely present in a purchasing

department. It is necessary; either to call on the financial direction of the company if it is able to take care of this kind of evaluations, or to call on organisations of financial information, organisations of analysis specialized in the supplier risks management, which propose services of quotation of the risks, credit institutions (banks doing factoring) that have the reassurance of their own risks when they acquire debts.

The solution to pass by an external organisation, although more expensive, is going to have big advantages to allow purchasing and financial departments to focus on other tasks bound to their heart of business, to have reliable and quality information, to go beyond the financial information to obtain also economical information, as the capacity of a supplier to assume his commitments in quality term, and its reactivity in case of difficulty. (Hassid, 2008) The costs of this kind of service can go from some tens of Euros for basic information to several hundred Euros in the case of thorough inquiries. Finally, even if the contribution of this kind of information is undeniable for companies, it is important to keep in head two notions. In order to have effective information, this has to be treated and it has to end in the implementation of actions. In spite of these agencies bringing a beneficial outside look, the buyers remain the main interlocutors of the suppliers and thus in the front line to know how to appreciate their economic and financial "shape" daily. They are the first ones to be able to detect what it is called the "low signals", the indications revealed by the supplier in spite of him. The economic and financial situation of a supplier can change very quickly, and even more in times of crisis. Thus, it is important not to focus only on figures supplied by these agencies that can, even a few months later, not reflect any more the real situation of a supplier. (Hassid, 2008)

The financial analysis is based on 3 elements: the balance sheet, the income statement and the cash flows (if they are available). (Barthelemy, 2004) The key indicators are the operating profit, the dependence of the supplier compared with the company and its first customers, the working capital requirement and its evolution, the solvency in short-term of the supplier, the profitability of the various activities of the company, the treasury. (Perrotin & Soulet de Brugière, 2008) The interest of these various indicators is to have a rather precise vision of the financial health of the supplier and thus to anticipate the reaction of this supplier during a reduction or a fast increase of activity.

The dependency ratio of the suppliers: One of the key indicators to study is the dependence of the supplier with regard to his first customer. This dependence can have important legal consequences. This is understandable by the principle of abuse of dependence as explains Aurélien Condomines: "a strong dependence of a supplier towards the orders of a buyer or a given distributor can also characterize the

existence of a state of economic dependence." In practice, the purchasing department tries to never exceed a dependency ratio of 25-30 % in their supplier. (Condomines, 2009) The taken penalties, if proof of dependence is made, are variable and always according to the economic environment and to the state of the relation between the supplier and the company. This dependency ratio is an element to be watched, even if it is not so simple for a supplier to be proved right in the case of a complaint for abuse of dependence.

2.2.3 The industrial risks and quality

The industrial risks and the quality are all the supplier risks that can lead to a dysfunction of the industrial production of the company, whether it is in term of quantity that of quality. (Perrotin & Soulet de Brugière, 2008) The consequences can be dramatic for the company and can go to the total stop of the production. We can distinguish 3 types of risks: the industrial risks, the risks about quality, and the technological risks.

Industrial risks: For the purchasing department, it is a question of limiting the risks bound to the capacity of the suppliers to supply the required goods for the production of the company. (Bouchet, 2007) For that purpose, it is necessary to study the following elements: the production capacity of the supplier, the process of planning of the supplier, the part of the company's orders on the global production of the supplier, the industrial imprint of the supplier, the presence of the supplier in the Low Cost Countries (LCC), the safety of the workers, the existence of plans for the prevention of the risks. (Barthelemy, 2004)

Risks about the Supply Chain: Beyond these purely industrial risks bound to the capacity of the suppliers to supply the company, other risks, bound to Supply Chain, are to be considered by the purchasing department, even if, more often, it is the Supply Chain service (when it exists) that is the holder of these risks. The Supply Chain Management (SCM) is the activity that consists in improving the physical flows and of information within the company and with its environment. The SCM aims, at the same time, at the cost cutting and at the improvement of the quality of the service to the customer. The risks are many but the main risk is the one of delay in delivery, which can cause a risk of break that can cause a stop in production. It is one of the reasons why companies create an "advance stock". It has a price (fixed asset of the goods, management fees, etc.) but the financial consequences of a break could be more expensive. There is a higher risk when the supplier is far from the company (LCC).

(Barthelemy, 2004) The other potential supplier risks bound to Supply Chain are: rising risks of the arbitrations of the supplier on their production (favour the deliveries of a customer to the detriment of another one), risks bound to the non-respect of the required deadlines, risks bound to the professional failures of the logistic and transport providers, risks compared with the logistic performance: give finished products to customers at the right time. (Périlhon, 2007)

Quality risks: In the industrial sector, the quality of a product must not be considered as a subjective notion but more as a conformity of the product (or service) bought from the wishes of the buyer, the wishes very often formalized by a requirements specification. This notion of quality can appear as an abstract element and quantifiable with difficulty. The non-quality can easily confront thanks to some feedback. The company has to be able to determine effectively the level of non-compliance of the product, in other words if the quality defect of the product is minor, major or critical. (Hassid, 2008)

In a framework of quality control, it is important to verify upstream if the supplier is able to supply the desired quality level. For that purpose, it is possible to set up a Supplier Quality Assurance, which allows decreasing control procedures downstream, control of entrance, non-compliances, customer complaints, etc. However, it is a rather heavy procedure to set up. It is necessary to set it up with supplier partners with whom the company does strategic purchases. (Perrotin & Loubère, 2005).

Technological risks: The technological risks can appear as well at the level of the company as at the level of the suppliers. The question is to know at which "stage of life" is the used technology, because at every stage correspond different risks of managing. (Bernard & Salviac, 2009) We can distinguish four phases: introduction, expansion, saturation, and decline. Beyond the phase in which technology is situated, the first risk is the dependence the company can have with regard to the supplier, on a technology it does not master. Even more if the supplier is the only owner of this technology (monopoly).

Bernard and Salviac approach the specific risks at every stage of technology. The first step is the introduction, with a level of high risk (not stabilized quality, high holding costs, and little visibility in the future) but which can represent a possible strategic advantage. The expansion is the second stage, with a still high level of risk (high price, stabilising quality, and little visibility). Saturation is when there is a low level (price drop, uncertainty on the future about the technology) but a strong reduction in the competitive advantage. The last step is the decline with a level of high risk (problems of availability, disengagement of the suppliers, high substitution costs).

2.2.4 The legal and regulatory risks

The main legal risks in which the purchasing services are exposed are the contractual risks, the risks bound to the intellectual property or to the patents, the regulatory risks at the sanitary level and on some consumer goods (food, cosmetics, etc.), the risks bound to sales and to sales bellow costs (risks of fraud) and the risks bound to the competition law. (Perrotin & Soulet de Brugière, 2008) The losses bound to these risks can be very considerable. The fast evolution of the laws and the regulations makes the task difficult for the purchasing departments that rarely have the legal skills to deal with complex cases. This is why more companies have an internal legal department or subcontract this part. (Hassid, 2008)

Civil fraud is similar to penal fraud. It is about an act that was realized by using disloyal ways intended to obtain an inconvenient material or moral advantage or realized with the intention to escape the execution of the laws. Connected with the business world, fraud is an act in bad faith, generally for a personal profit, committed to the detriment of the company. Very often, these risks are internal risks because employees are best placed for this kind of operations. (Perrotin & Soulet de Brugière, 2008) At the level of the relations between the purchasing department and the suppliers, the most common risks are when the employee negotiates personal conditions (gifts, accessories, etc.) with the supplier within the framework of the negotiation of a contract, places false orders, cheats over purchase prices or favours a supplier within the framework of procurement contracts or of calls for tenders. More purchasing departments set up a code of ethics. This charter permits to formalize clearly the rules of functioning of the service and every person has to conform to it. This charter imposes behaviour and processes of functioning to reduce the risks of internal fraud.

2.2.5 The risks in term of image

The image of the company is necessarily connected to the image of its customers and its suppliers because they are partners with whom the company decided to work. Concerning supplier risks, it is essential to make sure that the behaviour of the suppliers is in adequacy with the values of the company. The consequences of the behaviour of the suppliers can be catastrophic for the image and for the financial results of the company. (Hassid, 2008)

Risks bound to sustainable development: More than 20 years ago, a world and general awareness about the future of the Earth and its inhabitants revealed the concept of sustainable development. This concept gives an important part of responsibilities to States and to companies. Organisations quickly understood that the public opinion was more sensitive to this problem, what incites them to integrate this theme into their policies and into their communication. The strong exposure of this subject increases the risks in term of image incurred by companies in particular towards their suppliers. It is essential that the suppliers, and even more the foreign suppliers, be in agreement with the sustainable development policy of the company to preserve a positive image in front of consumers.

Sustainable development is a new conception of public interest, applied to the economic growth and reconsidered at the world level to take into account the general environmental aspects of a globalized planet. According to the world committee on environment and the development, the sustainable development is defined as "a development that meets the needs of generations of the present without compromising the capacity of the future generations to be answered in theirs". (Definition proposed in 1987 by the world Commission on the environment and the development in the report Brundtland) All the business sectors are concerned by the sustainable development and the "three pillars of the sustainable development" can sketch it: the economic performance passes by the pursuit of the development of the company and of the partners, the realization of economies of scale and the optimization of the total costs. The social and societal performance consist of making sure that the working conditions or the rights of employees are respected. Finally, the ecological performance (or environmental) is characterized by the limitation of the fatal effects that can have a company on its environment, but also by an economic management of natural resources. (Concept developed by John Elkington, co-founder of Sustainability, first British consulting firm in social responsibility of companies)

From the purchasing point of view, the risks bound to the sustainable development can be connected to the product (produced environment-friendly and according to the ethics) or to the supplier making this product. According to 3 pillars of the concept, the risks to estimate are the risks that can have an impact on the environment (waste management, use of recyclable products, management of the energy consumption), the social risks (respect for human rights, not child labour), the financial risks (fair exchanges between the suppliers and their local environment), and the societal risks (protection of the public health, the local initiatives, the preservation of the natural sites.) (Bouchet, 2007)

The supplier risks bound to the image are much higher when the suppliers are foreign. The laws are not the same in every country, the authorities can be lax and pass besides the application of certain

laws, or the distance with the concerned country makes more difficult the control of the working conditions of these suppliers. (Bouchet, 2007) Some elements can decrease the risks. Indeed, many companies created a charter of sustainable development in which the suppliers have to adhere to begin a commercial relation. More and more regulations or standards help companies in the implementation of an approach of sustainable development, in their level but also at the level of their suppliers. However, it is essential for a company that chooses strategically to work with foreign suppliers to have real means of control to make sure that these suppliers are true. (Hassid, 2008)

2.2.6 Human risks

The human risks are risks rarely evoked and can have consequences in the relations between a purchasing department and its suppliers. They can be understandable by several reasons. The relation with the suppliers lasts for several years and friendly relations were established. For example, small and medium-sized enterprises that work a lot with their local environment are more exposed to a lot of human relations. The most known risk of this kind of situations is that the buyer tends to select the suppliers and the products according to his affinities, more than according to purely professional criteria such as the price, the quality, the deadline of manufacturing, the capacity of manufacturing, etc. (Périlhon, 2007) It goes against the interest of the company.

3 IMPLEMENTATION OF A METHODOLOGY OF RISK MANAGEMENT

The risks with which the purchasing department is confronted can have consequences in terms of financial results, industrial, environmental, technological and human. (Hassid, 2008) The objective is to propose a methodology of risk management that meets the needs and problems of the company and more specially the purchasing department.

3.1 An integrated approach into a process of management of the suppliers

The biggest challenge for the purchasing department is to reduce costs without putting suppliers in danger. It is essential for the buyers to adopt a collaborative approach with the suppliers, to go at least with the strategic ones to real partnerships. These partnerships will have effects for the buyer's like getting better the innovation, increasing the performances of the supplier, decreasing supplier risks and working on a strategic differentiation. (Santhanam, 2013)

According to the stakes in the purchasing function, an optimal panel of suppliers is built around four steps: build the panel of suppliers, make the suppliers progress, make the suppliers participate in the new developments and integrate the suppliers into the everyday life of the department. All the added value of a mature purchasing management is there: "the implication of the suppliers in the management of the risks allows to define exactly with them the different actions to be implemented to avoid a crisis." (Wajnszok, 2009)

Building a panel of suppliers aims to reduce the number of suppliers to integrate them better and to be able to increase the volumes with them and obtain interesting tariff conditions. To know if a supplier deserves his place in the panel, it is necessary to take into account its performances, quality, costs, deadlines, innovation, and its place in the market. (Hassid, 2008)

In the perspective to constantly create some value for the company and to decrease the risks, it is necessary to make progress in selection of suppliers. It is made by the analysis of the performance supplier: quality (commit the suppliers in a continuous improvement approach and put it at their disposal), costs (estimate the productivity of the suppliers and assist them to avoid waste and the useless manipulations), deadlines (estimate all the Supply Chain with the suppliers to study the points of improve-

ment, estimate levels of inventory and risks of breaks), innovation (difficult to make the supplier progress on this point, except it the helper financially for the research & development department). (Hassid, 2008)

One important project is to integrate the suppliers as soon as possible into the development to make them participate in the achievement of an objective price, ask for innovative solutions (costs, competitiveness) to reach the goals of the company, make sure that the culture and the objectives of the company are understood by the suppliers. (Hassid, 2008)

The objectives of the supplier and those of the company coincide. The objective of the quality part is to have zero defect, one of the costs is to reduce the global costs, for the deadlines, the goal is to reduce them and increase the flexibility, finally the innovation: anticipate the new technologies to position the company better on markets. (Hassid, 2008)

3.2 The different steps to manage the supplier risks

In the process of identification and piloting of the risks, the purchasing department has a directly involved function in the strategic decisions of the company and in a role of interface between the outside environment and the rest of the company. It has a role to the implementation of tools and indicators to better identify, comprehend and pilot the risks. The purpose of the strategy of control of the risks is to check all the economic stakes and it is essential to understand the risks to list them, classify them, and manage them, to pilot them. According to the seminar of the management of the risks in purchases, it is necessary "to draw up an exhaustive list of the risks based on the events susceptible to cause, to stimulate, to prevent, to disturb, to speed up or to delay the achievement of the objectives that their source is or not under the control of the organisation." (Elien, 2013)

To develop this strategy, the Purchase Marketing is used: it is an approach of knowledge and supplier market analysis. It is "a research with the aim of the acquisition of products on the market supplier, according to the current and future needs, on the optimal conditions of profitability for the company." (Perrotin, 2007) Here, the objective is not to develop in depth the approach of Purchase Marketing but to highlight the stages useful for risk management and to bring tools to realize well this approach. The various steps to take into account in this approach are the following ones: the classification of purchases, the needs analysis and the market analysis, the visualization of the purchasing portfolio.

The purchasing classification is the first organisation action of a purchasing department. It consists in segmenting purchases in classes of purchases called purchasing families. This classification is essential because it is going to allow setting up a strategy adapted to markets concerned suppliers. (Elien, 2013) To realize this classification, Roger Perrotin's method is the most used. In this one, there are 3 levels of classification: (Perrotin, 2007)

- The first level is functional. It consists of 9 big business sectors, which correspond to purchasing concerns and different suppliers markets (raw materials, components of production, sub-contracting, consumables, service offers, engineering, IT, High-tech, and sublicense)
- The second level is technological. The objective is here to identify lines of products that correspond to the jobs of the company.
- The third level of classification is the classification by family of purchases. Every purchasing family has to represent a single market.

Creation of a family hierarchy: the Pareto graph (FIGURE 1). The next step is the study of the strategic purchasing families. By using the Pareto graph, three purchasing family classes can be distinguished:

- Class A that represents 80 % of the purchasing expenses. Generally, this class is only constituted by 20 % of the total number of families. It is the rule of 20/80: 20 % of families represent 80 % of the expenses.
- Class B that represents the 15 % of additional expenses
- Class C representing the remaining 5 %

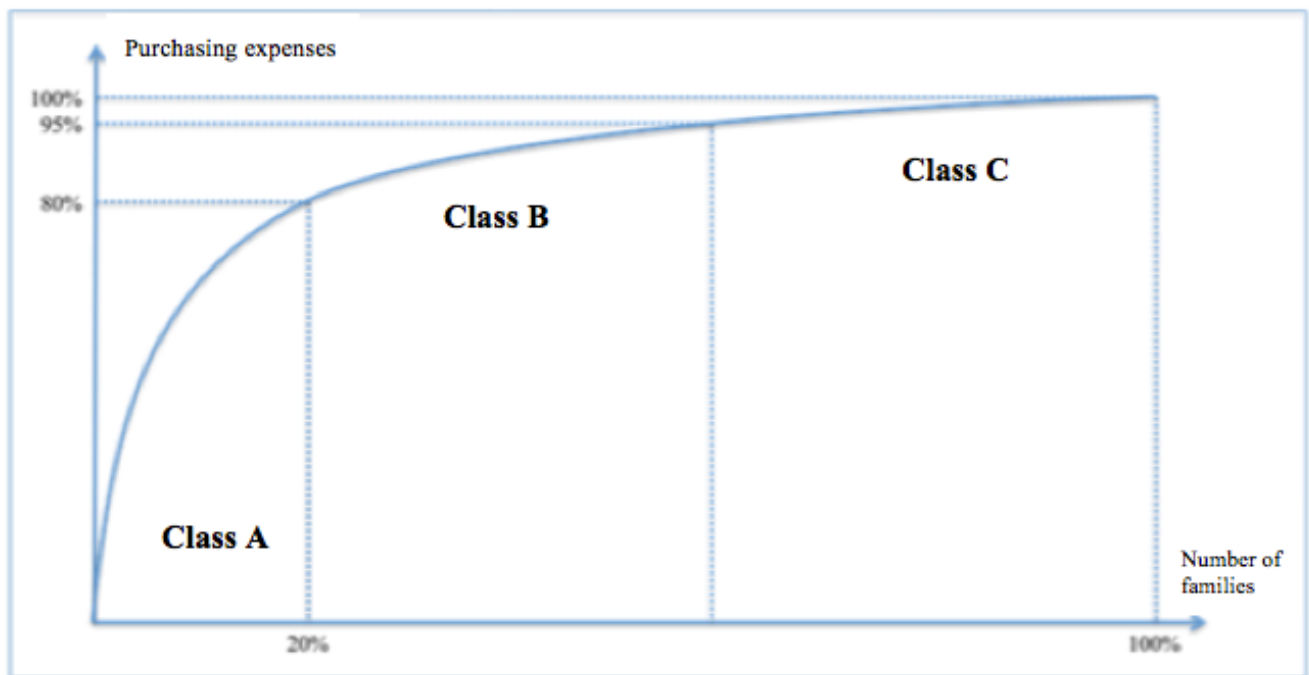


FIGURE 1: Pareto Graph.

Vilfrédo Paréto (1848-1923) is an Italian sociologist and economist. He remains famous for his observation of the 20 % of the population that possess 80 % of the wealth, generalized later (by Joseph Juran and others) in Pareto distribution. This observation was spread to other domains under the term of "Pareto's law".

This Pareto graph applied to the families of purchases permits to organize into a hierarchy the problems and to focus on the strategic families (in other words those of class A). Indeed, it is utopian to believe that it is possible to manage all the purchasing families. Strategically, it is well better to work on a number of families smaller than to try to treat superficially all the families. To determine the strategic families, it must not be based only on the financial stake, but it is also necessary to take into account constraints of the market, incurred risks and strategy of the company. From the point of view of the elaboration of an effective purchasing strategy, it is advisable to know the needs for the company in term of purchases, by studying the fundamental needs for the company and the needs by family of purchases. (Altares Study, 2010)

The fundamental needs are the qualitative needs for the company, which can sometimes be similar to its strategic needs. It is essential, on one hand to know them, and on the other hand to apply them and to estimate them during the sourcing of new suppliers or during the entrance on new markets. (Hassid, 2008) The objective is to determine needs, family by family, by estimating the bought quantities and the bought amount. This information is completed by the financial stake in the family (Pareto) and the

global appreciation of the quality by the evaluation of 2 or 3 bigger suppliers of the family.

Market analysis: The objective is here to estimate, for every strategic purchase, the market in which it progresses. This analysis consists in characterize the market, determine its limits, establish the strategies of the various market players and determine the various brakes to the purchase.

The structure of a market and the profitability of the activities within this market depend on five strengths according to Porter's Analysis (FIGURE 2): the threat of new incomers or barriers to entry, the intensity of the competition between the companies of the sector (growth rate of the market, the number and the strategy of the competitors), the threat with substitute products (products or technologies of the other sectors filling the same functions), the bargaining power of the customers, and the bargaining power of the suppliers.

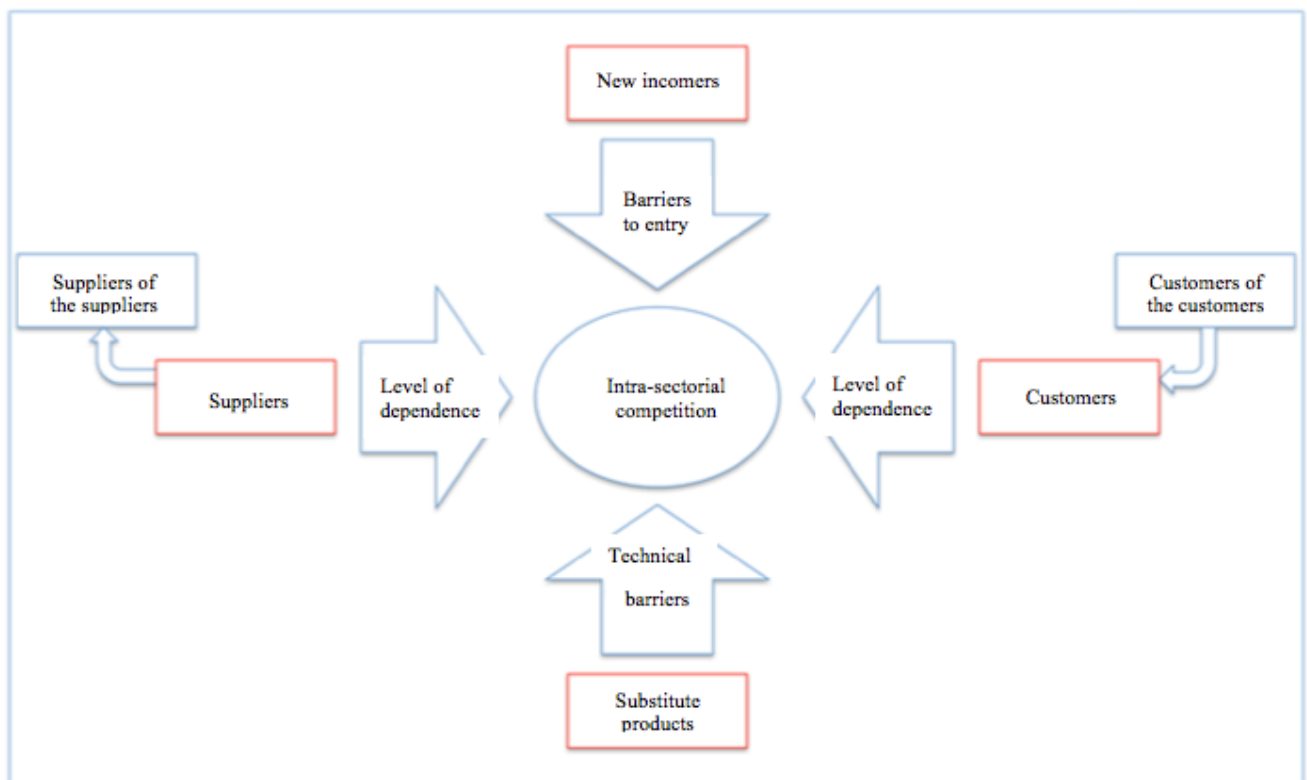


FIGURE 2: Porters' strengths illustration.

Michael Porter, born in 1947, is a professor of corporate strategy of the university of Harvard and also specialist of the economy of the development. One of the main theoretical contributions of Porter consists of a modelling of the competitive environment of the company under the shape of five factors, called strengths of Porter, which influence the sharing of the profits within an organisation.

To characterize a market supplier, it is advisable to determine its complexity by studying the constraints required by the market (FIGURE 3). These constraints are independent from internal constraints of the company: they measure an external complexity. These external constraints can be both technical and commercial. The technical complexity of a market supplier is considered as such according to the difficulty for the company to consider the offers as substitutable. This technical complexity can confront according to 4 variables that are the degree of heterogeneousness of the offers, the degree of specialization of the suppliers, the stability of the implemented technologies and the life expectancy of products. The notion of commercial complexity she is based on the idea that it is more or less difficult to make play the competition between the suppliers. This problem can result from 2 phenomena: the competitive structure of the market and the competitive stability.

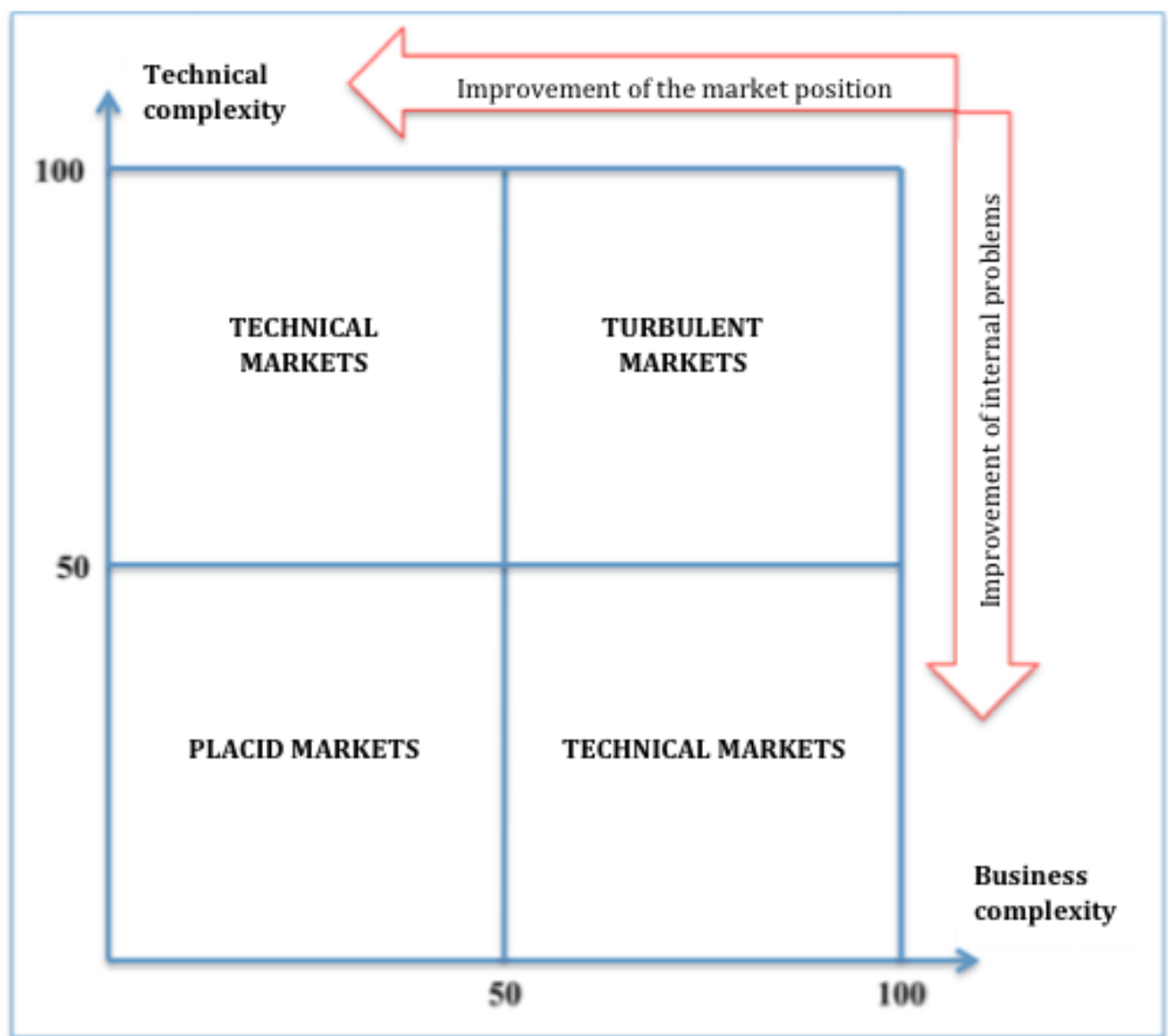


FIGURE 3: Markets matrix. (Perrotin & Soulet de Brugière, 2008)

The placid markets are markets where the technical and commercial complexities are low. It is the ideal position. The commercial markets are competitive markets in which it is difficult to position. It is like that for all the oligopolistic markets. The technical markets are markets where the technical complexity is clear but where the competition plays well enough. Finally, the turbulent markets combine two dimensions of complexity. (Hassid, 2008)

Internal analysis: visualising the purchasing portfolio: The objective is here to visualize the global purchasing portfolio and to study it to identify and organize into a hierarchy the actions to be set up.

The purchasing matrix (FIGURE 4) allows a good strategic visualising of the purchasing portfolio. For that purpose, it is necessary to take into account and to quantify 2 dimensions: the financial commitment of the concerned family (this dimension is determined by the classification of Pareto, realized previously) and the global risks incurred by the family. It is not here about supplier risks but about the risks in their entirety. Indeed, the objective is to know the strategic character of a family of purchases according to its financial stake naturally, but also to its level of risks for the company. This allows integrating other factors into the choice of the strategic families, that the simple financial commitment highlighted by the Pareto graph.

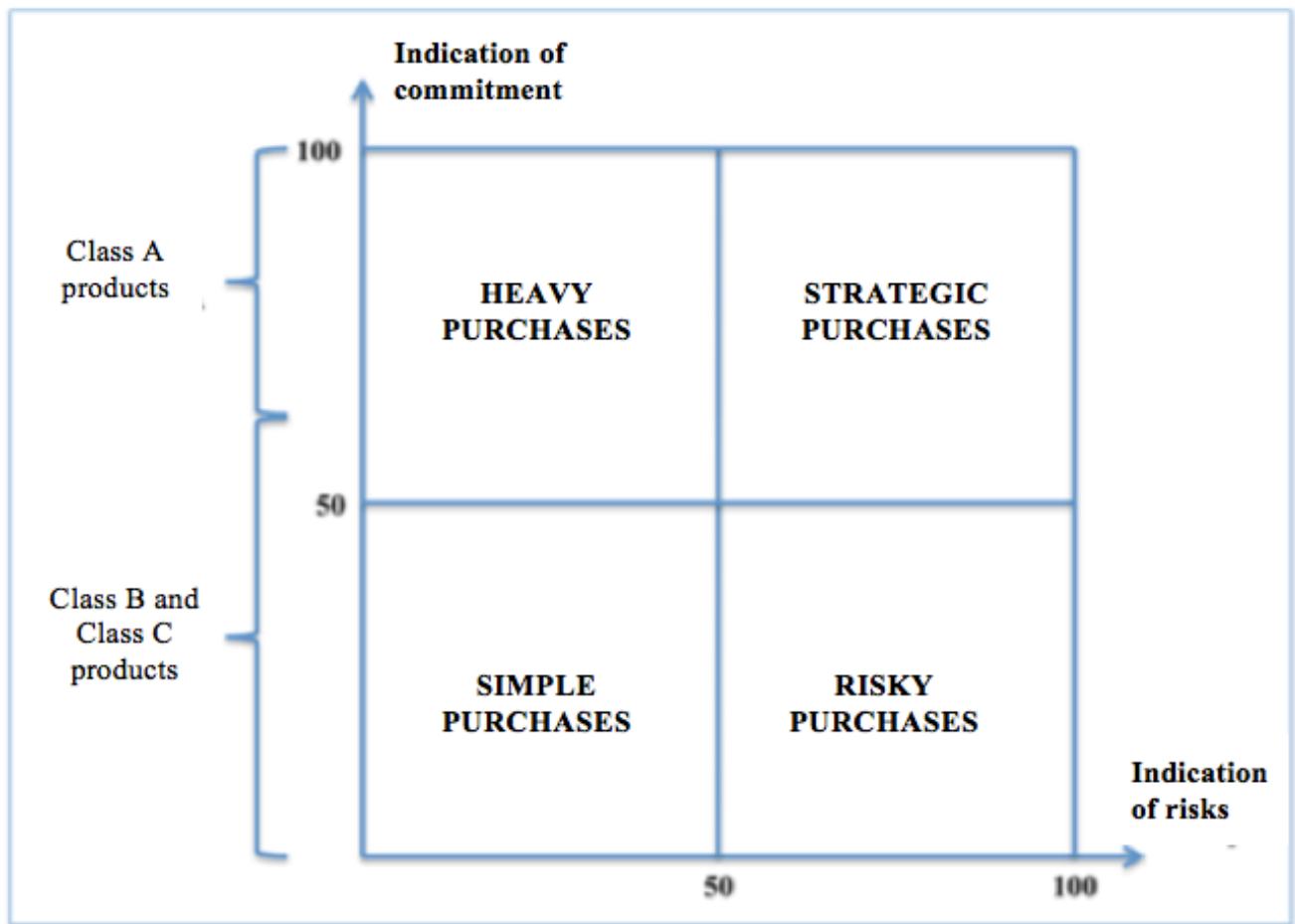


FIGURE 4: Purchasing matrix. (Perrotin & Soulet de Brugière, 2008)

To start, it is important to note the distinction between the notions of "risk" and "constraint". During the study of the matrix of markets, the external constraints imposed by markets were studied. A constraint can pull an important embarrassment in the work of the buyer without presenting any risk for the company (as the absence of internal communication, or the absence of standards). Conversely, a low constraint can have non-negotiable risks for the company (as a default risk of the product with regard to its planned use). The global risks can be distributed in 6 big families: the economic risks, the financial risks, the industrial risks and the quality, the legal risks, the business risks, the risks bound to the image. It is almost the same categories as for supplier risks, in the only difference that they are estimated on the scale of the company.



FIGURE 5: Families into the mapping of the risks. (Elien, 2013)

This matrix of decision (FIGURE 6) resumes elements studied previously to have a strategic view of the activity of the purchasing department and its market. It resumes the characteristics of purchases (purchasing matrix) and those of the markets (markets matrix).

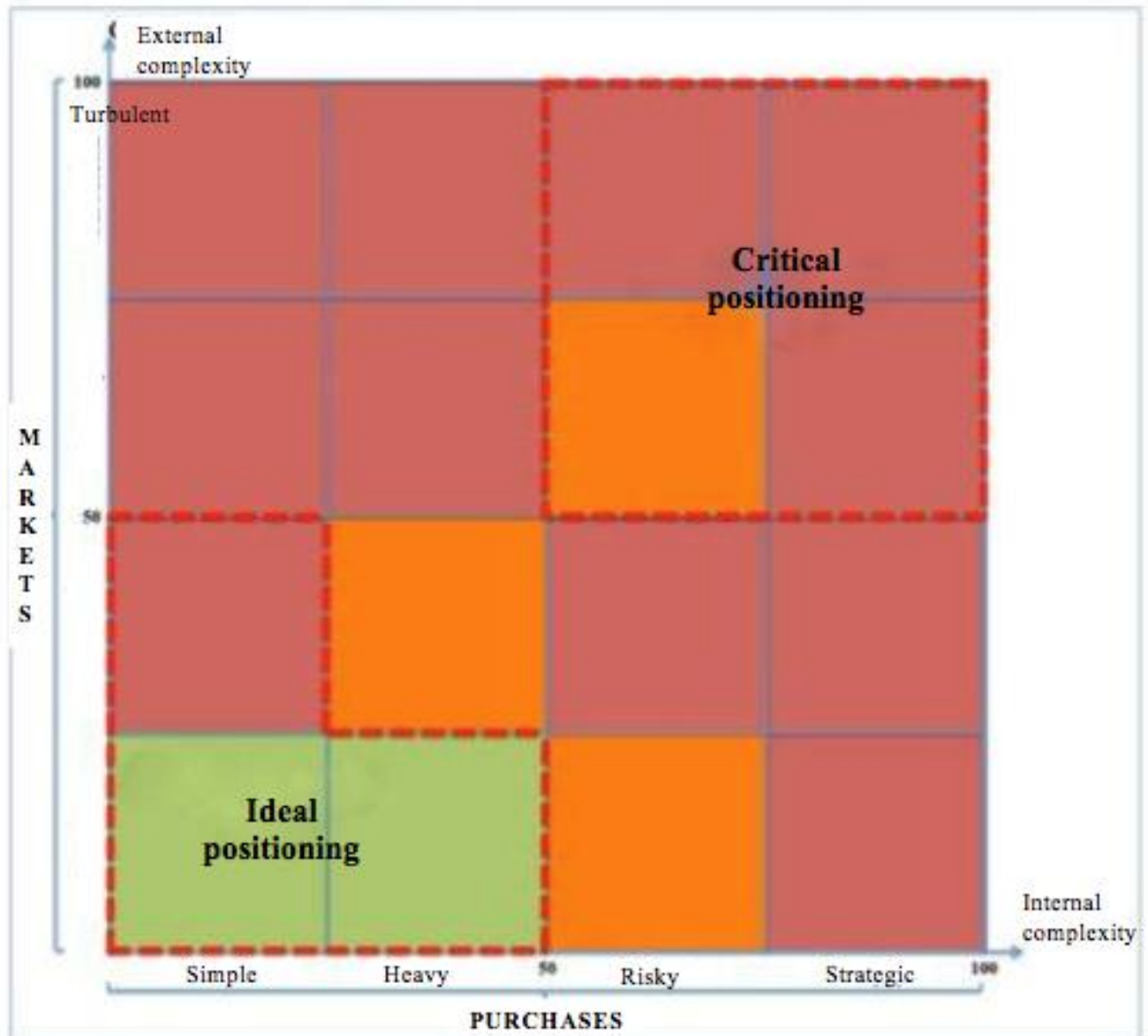


FIGURE 6: Matrix of decision. This matrix allows visualizing a purchasing family according to the external complexity (that of markets) and of the internal complexity (that of the company). (Hassid O., 2008)

Study of the positions: (Hassid, 2008)

- The favourable positions (in green): Only the intensity of the financial commitment can generate a certain internal complexity. But it is not within the competence of the buyer to modify these positions.
- The acceptable positions (in orange): Heavy purchases: the company could accept to manage the heavy purchases (high indication of commitment and low indication of risks) on a commercial market, but their competitive structure will be unfavourable. Risky purchases: the company

could accept to manage the risky purchases (low indication of commitment and high indication of risks) on markets having a complexity bound to these risks, what will be most of the time the case for markets with technical complexity. Strategic purchases: all the positions of the strategic purchases (high indication of commitment and high indication of risks) can be considered as acceptable because the importance is such for the company as the quality of the relation with the suppliers often plays a leading role with regard to the characteristics of the concerned supplier market.

- The unacceptable positions (in red): Here, “unacceptable” means that the positions for which there is a too big disproportion between the real stake and the level of complexity to manage. Simple purchases: the simple purchases (low indication of commitment and low indication of risks) in a market are considered as unacceptable having any external complexity, commercial or technical. Indeed, it is not acceptable, for purchases having a level of low commitment and a low level of risks that the buyer has to manage an external complexity on these supplies. Heavy purchases: for these purchases, the unacceptable positions correspond to the technical and turbulent markets. Indeed, on these positions, the technical external complexity is high and is not the same nature that the complexity interns based on the indication of commitment. Risky purchases: by the same reasoning, purchases risked in commercial and turbulent markets are considered as unacceptable.

The mapping of the risks is an approach divided into 4 steps: the identification of the strategic suppliers, the identification of supplier risks, the supplier risk assessment and the reporting. This approach of mapping is essential for a good suppliers’ risk management. How to well manage the risks if they are badly identified or badly estimated? This mapping is not static and can progress, especially after an analysis of the relevant markets. Indeed, this analysis could maybe highlight that some purchasing families are wide and they require to be more segmented, or, on the contrary, they would require a merging. The realisation of a mapping of the risks has to respond to several objectives as the identification of all the major risks in accordance with their impacts and their occurrences on the strategic objectives of the organisation, the measure of the importance of these risks in order to define some possible plans of action to reduce or control them, the graphic formulation of a risks’ representation based on their impact for the company is an excellent mean of communication, understood by everyone, provide the impetus for a process of risk management, the identified major risks allow restricting and controlling them, while improving the procedures and improve the communication around the risks bound to the purchases. Therefore, the collected information should be dated; it is essential to give an indication of time for each collected information. A mapping is realised at a time T and it lives

at the rhythm of the company. They have also to be consolidated because it is compulsory to corroborate the collected information from the different buyers. A risk can be different according to the kind of purchase (non-production and production) and even according to purchasing families. The mapping of the supplier risks take into account a set of risks bound to an internal or external environment. That's why it is advisable for a purchasing executive to be escorted by "men in the field", his hierarchy and his direction during the duration of the process; in order to have support and to have a overall view of the interactions into the company in its environment.

The mapping of the supplier risks includes several advantages but also some inconveniences. Mapping allows a good control of the risks with its vision in 360° that makes it an excellent communication tool. Concerning the disadvantages, the vision of the mapping can be maybe too focused on the macro economy and this tool needs to be often updated.

When the purchasing managers are asking for the brakes that they meet for a good risk management, the first answer is a lack of human means. It seems utopian to analyse all the suppliers so it is advisable to focus on the strategic suppliers. But what should be put under this label of "strategic supplier"? The first consideration will be the one of the financial commitment. As for the classification of the families of purchases, an analysis of Pareto will allow to highlight the 20 % of suppliers to whom 80 % of the budget purchases is spent. These strategic suppliers represent a strong financial commitment for the company (Pareto Graph). Then, the approach of Purchases Marketing, prerequisite in the analysis and in the piloting of the risks, allowed highlighting the strategic families for the company (matrix of purchases). These families have an important stake for the company (high indication of commitment) and represent an important part of risks (high indication of risks). The suppliers of these families require all the attention of the buyers. Finally, some suppliers, even if they are not necessarily identified by these two elements, can be strategic for the company to the views of the other aspects, less quantifiable, as the image of the company for example. It can also involve a new supplier for whom there is still not enough information but who is on a strategic niche. The panel of strategic suppliers is constantly evolving in time and proper to every company. (Barthelemy, 2004)

Once the strategic suppliers are identified, it is interesting to make a SWOT analysis (FIGURE 7) of these suppliers to position them better on their respective markets. Leading a SWOT analysis consists in making two diagnoses:

- An internal diagnosis, which identifies the strengths and the weaknesses of the supplier. These can be determined by means of a series of models of strategic analysis, such as the value chain,

the calibration (benchmarking) or the analysis of the cultural fabric. For example, it can involve the technological portfolio, the geographical presence, the network of partners, the structure of corporate governance, etc.

- An external diagnosis, which identifies the opportunities and the threats of the environment. These can be determined by series of strategic analysis models (as the Pestel model or the Porter model). For example, it can involve the raid of new competitors, the appearance of a new technology, the emergence of new regulations, the opening of new markets, etc.

The SWOT analysis - Strengths, Weaknesses, Opportunities and Threats - is a tool of corporate strategy allowing determining the possible strategic options at the level of a strategic activity sector.

The Pestel analysis implies politic, economic, social, technologic, environmental and legal fields. This method permits to analyse the processes, to estimate the various elements susceptible to affect the activity and to identify the opportunities or the threats for the organisation.

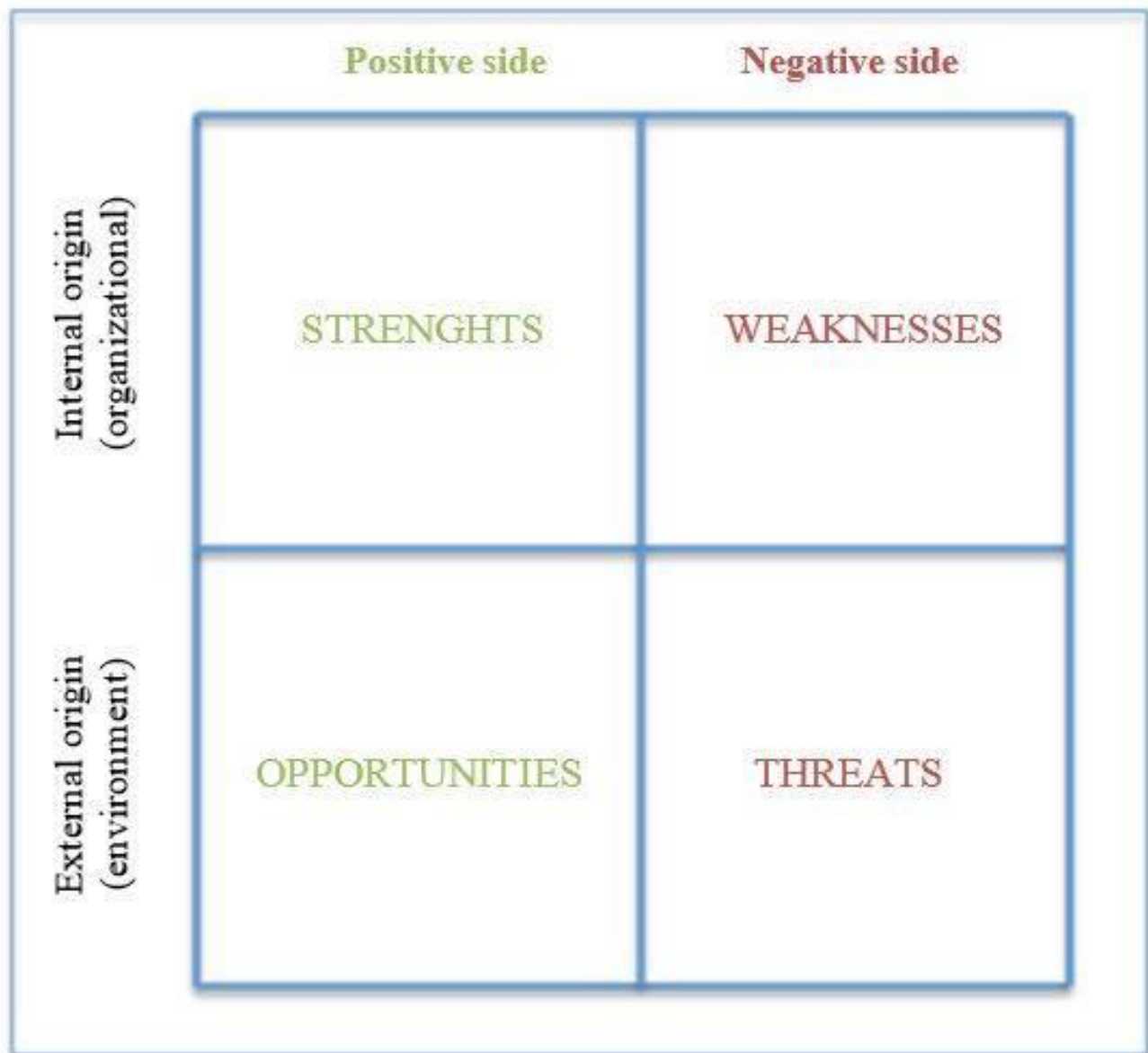


FIGURE 7: SWOT analysis. (Perrotin & Soulet de Brugière, 2008)

It is a question of listing the whole supplier risks that the company is subjected, by describing them in the most precise possible way. The more precise the description of the risks will be, the simpler it will be to estimate him then. It is necessary to know the class of risks (macroeconomic, industrial, legal, financial, human), the origin of the causes (natural, human, and technical, economic), the led consequences and the affected resources. Along with the identification of the risks, it is advisable to study the systems of internal control already set up for these risks, to distinguish two types of risks: the gross risks and the net risks.

During the stages of identification and assessment of suppliers' risks, it is advisable to understand this

notion of risk holder. Indeed, it is impossible, even for a very mature purchasing department and in constant relation with the other services of the company, to know all the risks of this one and to know how to estimate them correctly. It is true that the buyers are most of the time the main interlocutors of the suppliers. However, for example, only the financial or the production department can know some suppliers' risks because these employees are directly in contact with this risk and who manage it. They can be considered as the holders of the risk. (Hassid, 2008) Companies are submitted to some suppliers' risks that vary according to the business sector or to the size of the company. The list can be a basis from which every company can start the identification of its supplier risks.

Valuation method of the risks: When the supplier risks are listed, it is necessary to estimate them based, when it is possible, on quantitative criteria. In this approach of risk assessment, it is advisable, to obtain optimal results, to set up a questionnaire intended for the holder of the risk and allowing helping him in the risk assessment and favouring a common reference frame. This approach will be made on 2 plans: a general plan allowing having a global vision of the supplier risks and a particular plan, in which every strategic supplier will be estimated.

Notion of low signals: As seen in the study of the suppliers' risks, some indicators, in particular financial, are not recent and up to date. In view of the financial and economic conditions, the situation of a company can change very quickly. It is essential to linger over on the low signals: it is about a direct work with the supplier, in particular the strategic suppliers or the new suppliers, to note the signs that can be characteristic of a difficult situation (strikes of the staff, the redundancy, and the partially interrupted production). Moreover, these low signals can only be collected in the field. That is an essential point in buyer's role: if a buyer wants to stay current about the health of his suppliers, the evolution of a market, an appearance of new technologies, and to be strength of proposal in his company, he absolutely has to go out of his office to be directly in contact with the actors of his markets and his sectors. (Perrotin & Soulet de Brugière, 2008)

Importance of a common reference frame: Previously, the importance of the determination of the holder of the risk for identification and an optimal evaluation of the risks has been mentioned. The phase of evaluation is a delicate phase because it requires determining exactly a common reference frame. Indeed, in view of the number of people occurring in this phase, this reference frame will allow assuring the coherence of the obtained results. (Hassid, 2008) The common reference frame can take the form, at the level of the questionnaire, of the precise proposals for every notation (from 1 to 5 for the proba-

bility and the impact) allowing the holder of the risk positioning better.

Notion of gross risk and net risk (FIGURE 8): It is important, in the risk management, to make the distinction between a gross risk and a net risk. The gross risk allows analysing the absolute exposure of the company at the risk, in the absence of any element of control of this risk. The net risk corresponds to the current exposure of the company at this risk, by taking into account the set up control plans. (Hassid, 2008) In term of assessment, it is simpler to estimate a net risk because it is the risk such as they really perceives it. However, it is essential to estimate the gross risk to highlight the efficiency of the control plan.

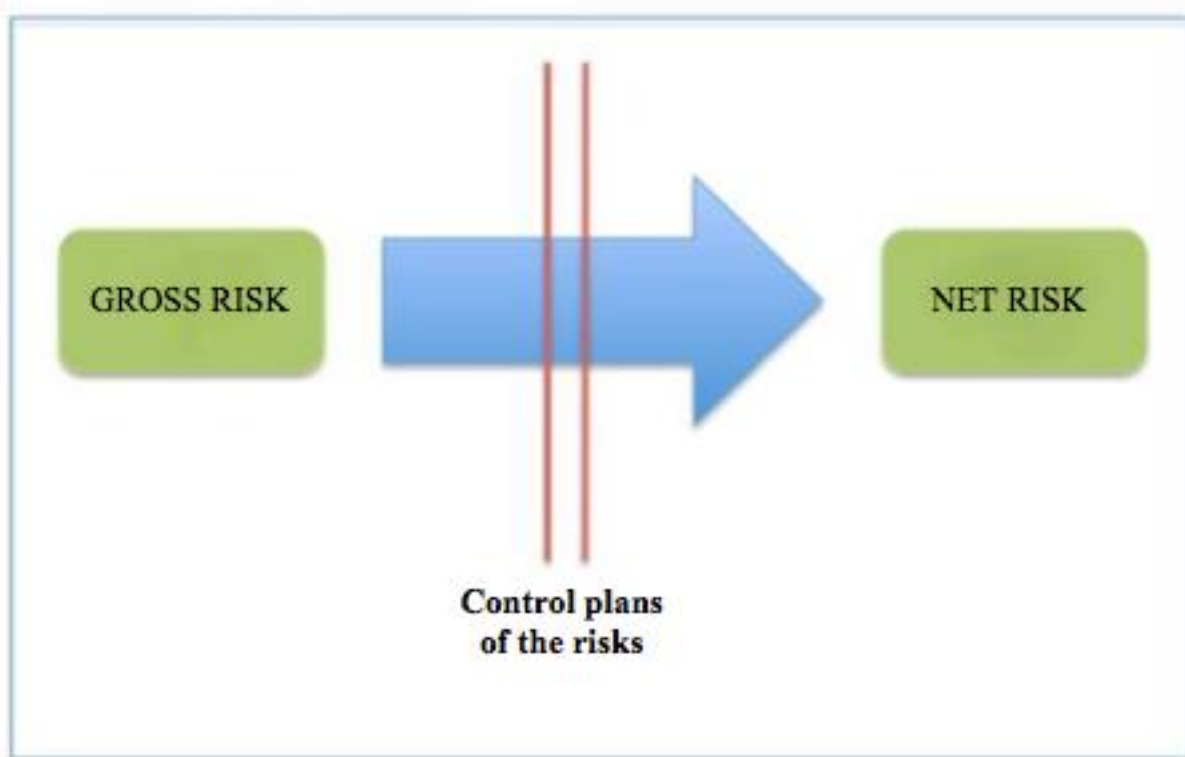


FIGURE 8: Gross risk/Net risk. (Perrotin & Soulet de Brugière, 2008)

Evaluation of the gravity of the supplier risk: The evaluation of the gravity of the supplier risk is going to come true according to 2 criteria. The probability of occurrence of the risk, that is the probability that this risk comes true and the level of potential impact, which is the impact that will have this risk on the company if it comes true. These 2 criteria have scales of evaluation going from 1 to 5 according to the precise criteria of quantification.

Total Cost of the Risk (TCR) / Cost of Control of the Risk (CCR): To determine the potential impact

of a supplier risk on the company, the main criteria of evaluation stay the financial impact that this risk on the company could have. We also speak about Total Cost of the Risk. It is important to calculate this TCR to compare it with the Cost of Control of the Risk (CCR), the CCR is the cost of the implementation of the control system. It is strategically essential to be able to compare these 2 indications because if the CCR is upper to the TCR, there is no financial interest to handle this risk. In this case, either the risk can be transferred (to an insurance policy for example) but the costs can be also high or the risk can be accepted, without setting up of control system. (Rivière, 2009)

The efficiency of the control plan: The efficiency of a control plan of a risk is the resultant of 2 variants. The relevance constitutes the capacity of a plan to reduce the gravity of a risk, by the decrease of the probability of occurrence or the potential impact. The scale of taken evaluation can be: appropriate / perfectible / inadequate. And, the performance corresponds to the quality of the operational application of a given control plan. The scale of evaluation can be: applied / partially applied / not applied. (Perilhon, 2007) For example, an internal control system of risks can be effective but a bad application can decrease its effects. In this way, the efficiency of the device of control corresponds to the difference between the gross risk and the net risk. The more the gap is big, the more the plan is relevant and successful.

Notion of residual risk: Some people assimilate the residual risk to the net risk, in other words it is the risk substituting after the treatment of this risk. This term of residual risk can be also used for the incompressible part of the risk, part that can be never eliminated, whatever the set up actions. (Perilhon, 2007)

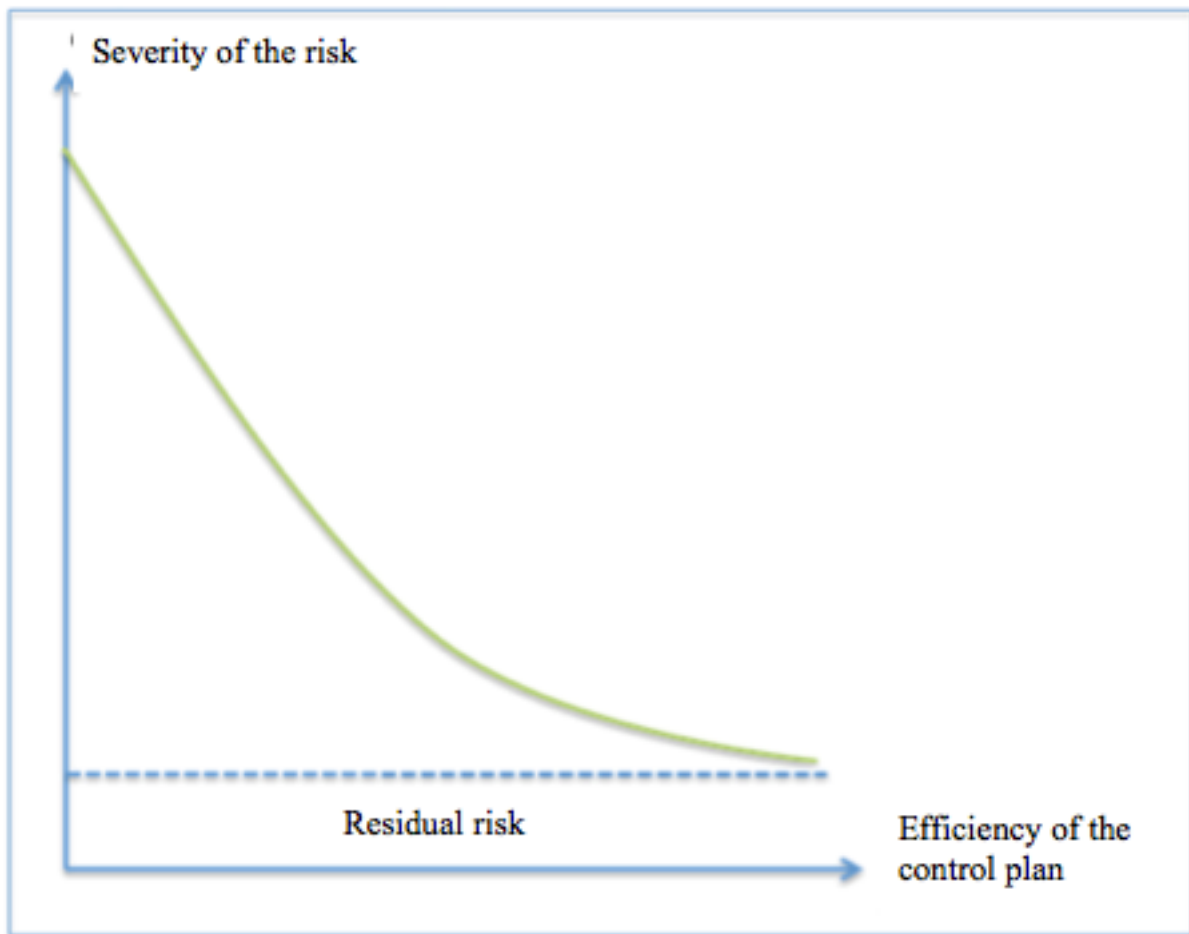


FIGURE 9: Residual risk. (Perrotin & Soulet de Brugière, 2008)

The interest of the determination of this residual risk is to know to where can go the control of the risk and what can be the optimal result. This data will be important in the strategic decision-making: if the residual risk is too important, it is better to wonder if it is wise to take it. Or then the company can, for example, sign an insurance policy to transfer this residual risk towards the company that will assume the cost.

The objective is now to synthesize the collected information by tabulating. These tables are going to allow having an overall view of the situation, putting forward supplier risks to be handled and following the results over a given period. (Elien, 2013)

Global plan of management of the suppliers' risks: Two elements that are going to allow synthesizing all the supplier risks of the strategic families are:

- The grid of evaluation and risk management suppliers (APPENDIX 2)
- The representation of this grid by the risks matrix on which will be positioned the most relevant

ten risks, by making the distinction between gross and net risks (FIGURE 10).

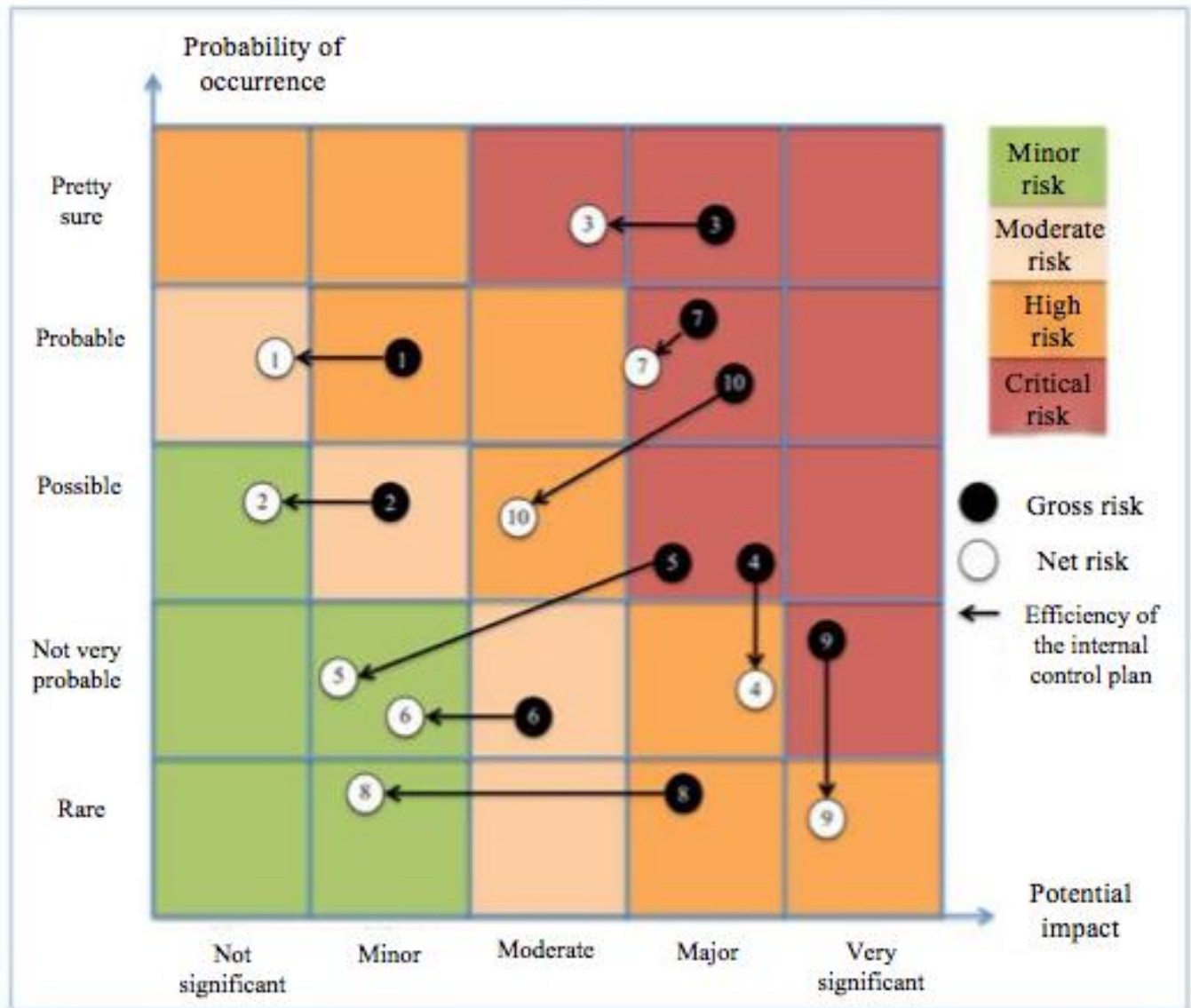


FIGURE 10: Matrix of the risks. (Hassid, 2008)

This risk matrix allows to visualizing the most important supplier risks at the level of the strategic families. It resumes elements seen during the evaluation: the gross risks, the net risks (after the implementation of an internal control system) and the efficiency of the intern control system (represented by the black arrow). The more this arrow is big and the more the control is efficient. It allows seeing what are the risks that are already well checked and, on the contrary, which are the ones for which it would be necessary to revise the plan. (Hassid, 2008)

Dashboard of the strategic supplier: This methodology has to allow also, beyond the global supplier

risks, lingering more in detail over the risks at every strategic supplier, and to establish a dashboard of the risks for each. This dashboard will allow, for every strategic supplier, having a precise and synthetic view of the incurred risks and the set up actions during the piloting of the risks. (APPENDIX 3) The risk management involves the implementation of specific process, methods and tools allowing handling the identified events. The practical application of the means and the tools has to be subject to a follow-up within the company. The processes must be periodically revised in organizations. In this way, the following stage will be the integration and the piloting of the processes. (Barthelemy, 2004)

To assess the concept of maturity of an organisation, the purchasing services use a maturity scale of the risk management process. It contains 5 phases: informal, rough, outlined, integrated and optimised. The informal process is an undocumented process based only on individual initiatives. When the risk is identified and managed in different ways, it is called rough process: with a non-global vision and no rigorous process established. When the process is outlined, there is a common structure that treat the assessment and the processing of the risks; the headquarter has an overview on the possible risks and some action plans are implemented according to the most important risks. The integrated process deals with a coordinated management in the business units with common risk management tools and processes and evaluates and postpones regularly through the company. Finally, the optimised process aims to analyse the integrated risks of the strategy and to have a system of detection of the risks; indeed, if the risks grow in importance and move up a notch, the executive committee is notified.

How a purchasing function can manage and integrate the risks, knowing that, in front of risks, every company has its peculiarities and its own experience, which is more or less evolved? After having developed the mapping of supplier risks, it is now necessary to pilot them. What the term "piloting of the risks" means exactly? The piloting of the risks consists in develop the plan of reduction of the risks, set up the actions and follow the actions and their results.

The strategies of management of a risk (FIGURE 11): The five manners to manage a risk are the following ones: the prevention, the acceptance, the avoidance, the reduction, and the transfer. (Altares Study, 2010) Obviously, in the practice, the set up actions for the management of a risk can be a combination of various methods.

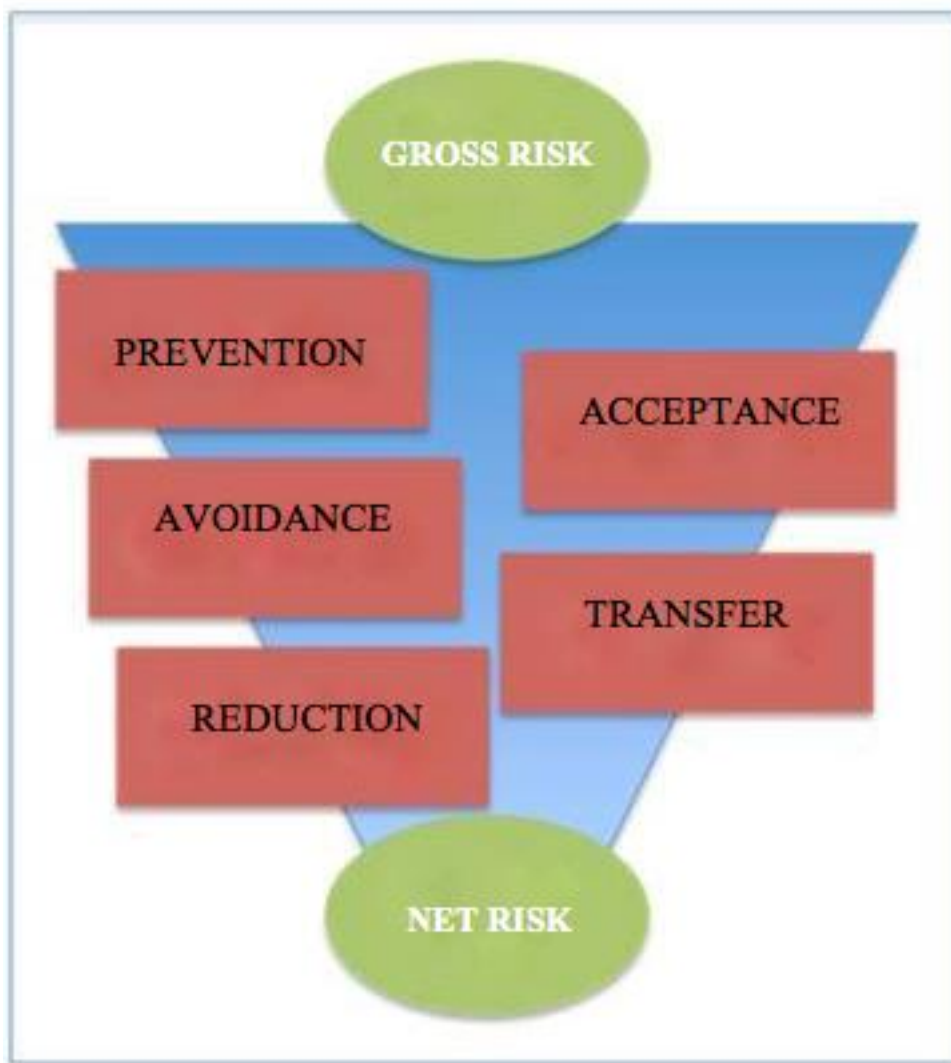


FIGURE 11: Strategy of management of a risk. (Perrotin & Soulet de Brugière, 2008)

- The prevention. The objective is to limit the appearance of the dreaded event, what means decreasing the probability of occurrence of the risk. This strategy is most of the time applied first.
- The acceptance. The acceptance consists in setting up no control system of the risk and thus in agreeing to take this risk such as it is. This decision is due most of the time to a CCR (Cost of Control of the Risk) $>$ TCR (Total Cost of the Risk): if the financial impact that this risk can have is lower than the cost of control of this one, the company has no interest to act. It will then be necessary to ask the question to know if it is really essential for the company to take this risk.
- The avoidance. This radical technique consists in not taking any more this risk by eliminating its cause. It is little used but it can be necessary when, for example, the financial impact of the long-term risk is widely upper to the profit than the company can remove from the action in its origin.
- The reduction. Observation, identification of the risks by the audit, analysis by the search for the risk factors and for the vulnerabilities, control of the risks by measures of prevention and protection: it is

the classic approach of risk management. By the implementation of control plans, the gravity of the risks is reduced, either by the reduction of the probability of occurrence, or by the reduction of their impact.

- The transfer. The transfer of risks was already approached previously on the case of the residual risks. The objective is here to transfer the risk to an entity outside the company so that it takes the responsibility. In the case of a residual risk, it is a question of returning its gravity to 0 by transferring it, generally at an insurer. This transfer of risks can also be made when the company subcontracts the activity at risk under a form or another one (direct subcontracting, outsourcing...). However this transfer can increase its gravity, if the subcontractor is not qualified or disdainful about the risk in question. Furthermore, attention not to transfer the risk in intern: a transfer of risk is obviously effective only if it is transferred outside of the company. This is the notion of internal balance: there is no interest for the company to decrease a risk by increasing another one. (Hassid, 2008)

The classification of the various stages of the risk management (FIGURE 12), from the phase the best organized to the least good organized phase is: (Santhanam, 2013)

1. Analysis of the risks
2. Determination of the possible scenarios of reduction of the risks
3. Decision on the adequate scenario
4. Implementation of the actions
5. Communication with the other departments
6. Regular follow-up of the actions

The more we move forward in the process, the less the stages are mastered and correctly organized. Nevertheless, even if the mapping of the risks is important, it has no use if it is not followed by the implementation of actions. Each of the steps of the piloting of the risks is important for obtaining real results.

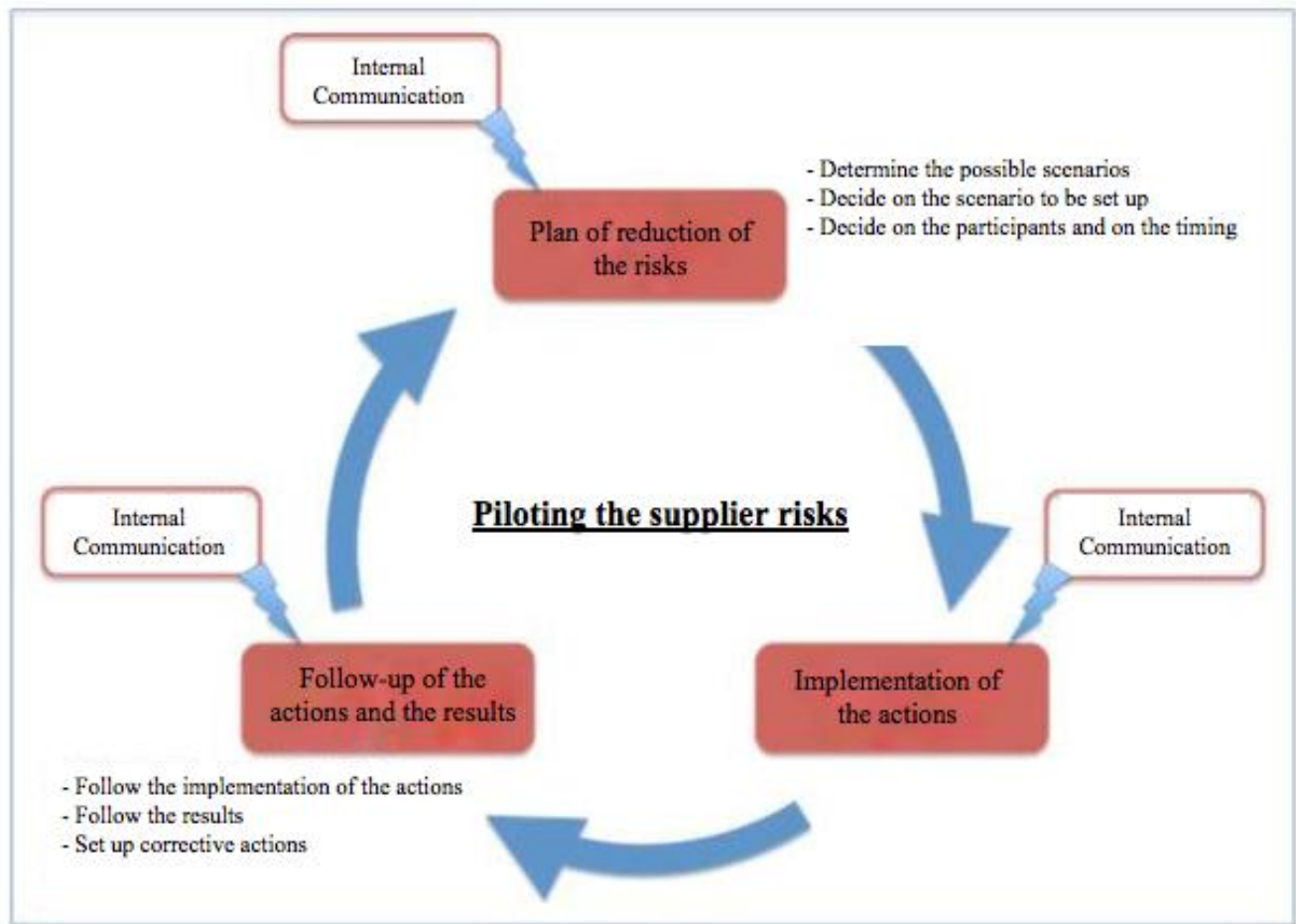


FIGURE 12: Piloting the risks. (Hassid, 2008)

Plan of reduction of the risks: The first step is to determine the actions that are going to be organized, the people who are going to lead them and under which timing. In summary, it is necessary to answer the questions: How? Who? When? “How” corresponds to the strategy organized to handle the risk, “Who” corresponds to the holder of the risk and “When” corresponds to the timing of realization of the actions. These elements are resumed in the grid of evaluation and supplier risk management. It will also be advisable to realize a “road map” for every speaker so that each knows the tasks that he has to carry out and under which deadline. This phase, just like the previous phase of mapping of the risks has to be made in partnership with the various holders of the risks and the future speakers to be sure to obtain the membership of everybody in the plan of reduction of the risks.

Implementation of the actions: The second phase consists in setting up the actions that will have been determined beforehand.

Follow-up of the actions and the results: This phase is essential in the risk management but often put

aside. Follow-up of the actions: For that purpose, it is necessary to establish from the beginning regular meetings. These meetings can be only intended for the risk management but can also become integrated into existing meetings of supplier review or into purchasing committees. It is also necessary to think of updating the existing documentations, from the suppliers' forms, the grid of evaluation and risk management, the plans of progress, purchasing reporting purchases. It is also important to follow the evolution of the results throughout the risk management process to estimate the efficiency of the organized actions. This regular follow-up of the obtained results will then allow to make the decisions that result from them: either the results are up to what was expected and the actions can continue in that way, or the results are bad and the situation has to be revised and the concerned supplier risk reanalysed, from the evaluation of this risk to the implementation of a new scenario of management of this risk.

In intern as in extern, the communication is an essential factor of success throughout the risk management process: when the communication is absent or with poor quality, it is impossible to develop an effective risk management. The communication is the focal point in a company but especially in a purchasing department; indeed, it acts between the stakeholders. (Hassid, 2008) This communication is even more important as the risk management calls on a lot of internal participants (in the other departments) and extern ones (suppliers). Even if it is the purchasing service that pilots, the information comes largely from these participants and it will be necessary to find the good speech to reunite these participants to the project. According to the ranking of the stages of the risk management, from the best-organized phase to the least good realized phase. We can notice that the communication is not firmly in place because it obtains the 5th place on 6 criteria:

1. Analysis of the risks
2. Determination of the possible scenarios of reduction of the risks
3. Decision on the adequate scenario
4. Implementation of the actions
5. Communication with the other departments
6. Regular follow-up of the actions

The communication on the risks has for purposes that the information and the education of the different internal and external participants, thanks to a better understanding of the problems: each has to understand the interest of this approach of risk management to integrate it, for the company and for the suppliers, and the consideration of the diversity of the levels of understanding and the obvious difference of the interests. According to Frédéric Bernard and Eric Salviac, "to communicate effectively on the risks, it is necessary to determine the concerned perimeter, to collect reliable data, to present the

analysis of the situation, to explain the reasons and the consequences of the situation, and to make stakeholders a partner." (Bernard & Salviac, 2009)

4 AN EXAMPLE: BRAKES MET IN SME

This survey was realised within a purchasing department of a SME. The entire department was interviewed, 6 people, about the risk management in their company. The goal of this interview was not to make conclusions after this interview but having a practical vision to illustrate the previous works. Almost all the methodology was written thanks to the negotiation and purchasing department of the Adecco Spain company, where the author did a six months internship last year. This methodology is very general and is suitable to all the companies and their purchasing service. (Questions and answers in APPENDIX 4)

The risk management is little treated in the SME: First of all, the risk management is still badly approached in SME. Indeed, only 28 % of these companies consider handling correctly the risk management. It means that most of the SME did not perceive the interest of this initiative. The purchasing department will have to communicate on its interests for the company and for each of its employees. The approach of mapping of the risks is still little realized in SME: only 29 % of these companies realize a mapping of the risks at least once a year.

Lack of support of the head office in SME: Two main evoked reasons concern the head office. In the SME, there is rarely of global strategy on the risks implementation (25 %) and the risk management is not considered as a priority by the direction (22 %). The lacks of human means (17 %) and of maturity of the purchasing department (13 %) come after. The message goes correctly with the all of the services of the company, the head office has to adhere totally to the project. Without its active support, the adherence of the employees of the company in the risk management will be slender. For that purpose, it is necessary, when the head office is lacking sensibility on this subject, to find the arguments to make it understand the interests of this approach.

All the departments do not have the same degree of understanding and the same look on the problem of risk management. It seems obvious that the argumentative speech will not be the same if the purchasing employee speaks to the director general or to the person in charge of production. It is necessary to know how to adapt the speech according to his interlocutor, so that each understands the interests at the level of the company as at the personal level.

The way of functioning is based most of the time on the reaction that on the anticipation: For the pur-

chasing department of a SME, that what could explain a mismanagement of the risks from them is the lack of maturity into the purchasing service (17 %) and the lack of human means (17 %). Another brake is that the risks are not foreseen and only treated when there is a problem (14 %). Nevertheless, this last answer about the non-anticipation of the risks is interesting. This can naturally be interpreted as a lack of maturity of the purchasing department but not only. It is especially symptomatic of a human reaction according to which the problem does not exist as long as it did not actually come. In term of communication, it is going to need to make the good messages pass in order that all the participants include the approach and to avoid the typical reactions: "Why they want to manage the risks while we have never met problems yet!"

Withholding information was already approached on the human risks, many people in a company think of attributing importance of themselves by being the only holder of the information. It is one of plagues of the communication generally in the company. Furthermore, the analysis of the risks can highlight certain dysfunctions in the processes, what forces the participants to hide certain elements. In the analysis of the risks, their evaluation or the search for scenarios for the decrease of these risks, the participants are going to be not inevitably very talkative on the subject. The communication on the risks is essential if we want to reach the set goals. The important is to set up well the strategic frame of the communication. For that purpose, it is necessary to define the objective of the communication, the targets, the kinds of approaches, the key messages, and the channels and communication mediums. The objective of communication has to be exact and measurable, realist and reachable and situation in the time and the space. Once the objectives defined, it is advisable to define "target groups" and to distinguish the groups directly affected by the problem to be solved, and the groups having a role to play in its resolution. Then, it is necessary to determine the kind of approach according to every target. The methods are varied: participative approach, information, education, training, etc. It is a question of developing the key messages that the purchasing managers want to make pass on. In these messages, it will be necessary to linger as well over the content (contained by the message) as over the way the message is spent (rational, emotional, positive, negative message, etc.). Finally, it is necessary to know how to communicate this message, in other words, by which channels (political, media, sociocultural). In certain companies, this approach of risk management can lead to strong modifications in the working habits of certain employees: it is the process of change. In this process, it will be advisable to take into account 4 essential elements of stability: a clear and precise stake, a common construction of the rules, the implementation of a system to introduce and regulate the actions, and a state of mind which is oriented more towards "solution" than "problem".

5 CONCLUSION

A company, with all the stakes that it engenders and that it has to take into account, is submitted to a series of risks. These risks are particular in the purchasing department due to the complexity of this service and the opening on the exterior. Indeed, besides being a strategic department of the company, it is opened towards the outside and opens itself to important supplier risks. In order to ensure the sustainability and the growth of the company, the management of the risks must be part of the purchasing strategy and must be integrate of the daily work of the buyers. The company must be attentive to all the factors to deal with these risks. It has to set up techniques and strategies to remain a competitive and effective service of the company.

The purchasing department uses four big steps to make the management of the risks easier. The first one is the control of the purchasing portfolio based on three axes that are the market, the internal constraints and the suppliers. It supposes a good knowledge of the market. The second one is the installation of a “strategic monitoring” to have at any time the good information and be able to develop a competitive advantage allowing supporting the competitiveness by the identification of the operational best practices. However, a risk is always latent and the monitoring allows mastering the effects. The third stage is the use of the different matrices to quantify each constraint, to know on which market the department takes place; with which kind of purchases is involved; what are the risks and which is the decision to select. Finally, the fourth one is the realisation of dashboards and piloting tools to take back all the major indicators to keep under surveillance.

Practically, estimate the risks bound to the activity of purchases allows consolidating the appointed orientations, explaining the cleared results with regard to the defined objectives and making live the organized strategies. In theory, a process, with a succession of stages that is going to lead to a final goal, is set up. Its interest for a company to manage the risks is to make sure that it knows and understands the risks to which it is exposed; to become aware of the internal and outside fragility of its organization and the possible consequences (risks); to prevent the damage and react to hazards; to set up a plan of prevention; and to protect and/or to improve the value, the image of the company by guaranteeing for a reasonable risk-taking. The management also plays a big role in the face of these risks. Indeed, it has to set specific and measurable goals (strategic, operational, bound to the reporting and legal); to estimate the risks and the opportunities of every objective (SWOT model); to determine the reality of every risk; to imagine various scenarios and to find their solutions, to estimate the residual

risks; to set up control policies of the identified risks.

Finally, the management of the supplier risks runs on three levels. The first one is the risk management, piloted by the person in charge of the activities by appropriate control plans, the identification and the implementation of follow-ups. The second is the piloting of the risks, led by the person in charge of purchasing department by an approach and a policy particular and a frequent reporting. Finally, the third is the integration of the risks, made by the managers via the validation of principles and precise objectives.

To put it in a nutshell, the risk management in the Purchasing Department can control itself by all the following stages. In the first place, the identification of the various risks bound to the internal and external environments of the company, to the specificities of the purchase; then, by the hierarchical organization of these risks according to their impact on the activity, next by the formalization of a mapping of the risks. Also, by the decisions to take: to accept these risks, to check them or to transfer them? To continue, the implementation of common and specific adapted tools and the integration of this system in a process evolving according to the maturity of the company in front of risks. The deployment and the follow-up of the process by the management, that assure the good communication between the various stakeholders, without ever forgetting to make the regular monitoring that can lead to the evolution of the established information.

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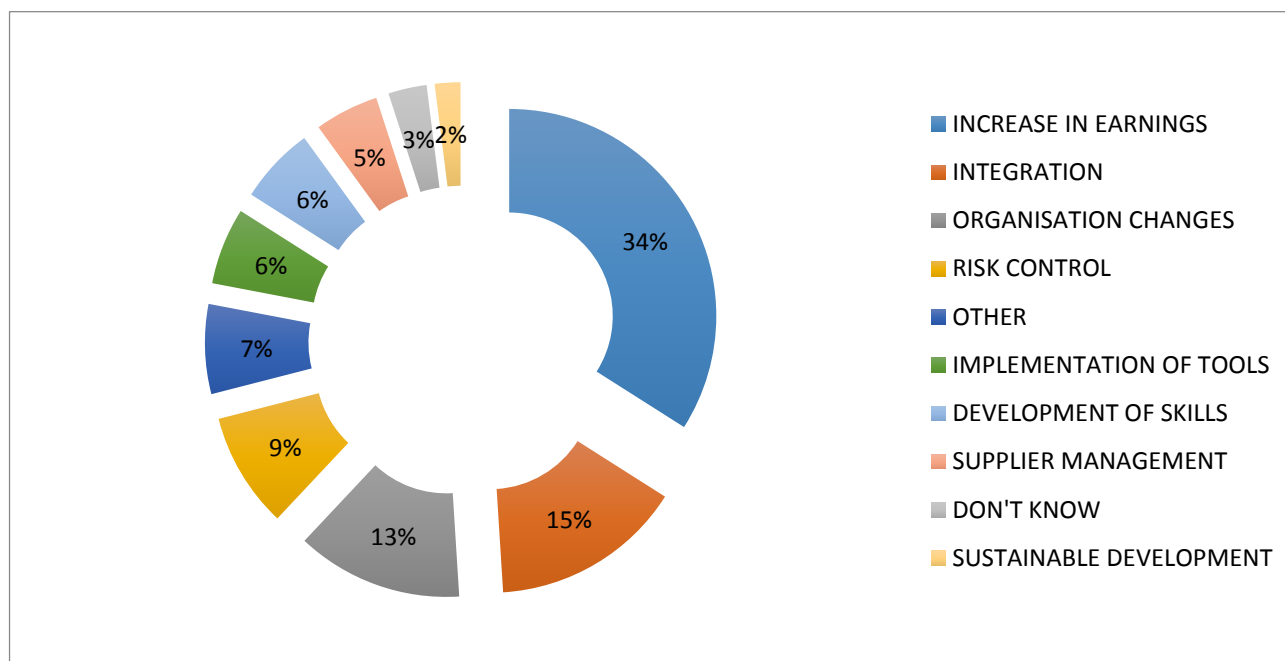
Negotiation and purchasing department, Adecco Spain. July 2015 and March 2016.

Purchasing department, SME in Nantes (France) area. March 2016

APPENDICES

APPENDIX 1: The priorities of the purchasing function.

Source: Purchasing Observatory, 5th edition 2010.



APPENDIX 2: Grid of evaluation and risk management suppliers.

Source: Séminaire - La gestion du risque aux achats, 2013.

	1- Economical risks			2- Financial risks			3- Industrial & quality risks				4- Legal risks		5- Business risks				TOTAL RISK
	Markets	Price	Country	Exploitation	Suppliers	Treasury	Quality	Technology	Industrial	Supply Chain	Contractual	Legal	Strategy	Piloting	Method	Process	
A- Strategic families. Critical purchases for the production	3	2	3	2	3	2	3	3	3	3	2	2	3	3	3	3	2,7
B- Critical families. Complex purchases on specifications	3	2	2	2	2	1	2	3	2	3	2	1	2	3	3	2	2,2
C- Control stick families. Purchases of volumes	1	2	2	1	1	2	1	1	1	2	1	1	1	1	2	2	1,4
D- Simple families. Common non-production purchases	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1,1
TOTAL RISK	8	7	8	6	7	6	7	8	7	9	6	5	7	8	9	9	1,8
			1,92			1,58				1,94		1,38				2,06	

APPENDIX 3: Dashboard for strategic suppliers.

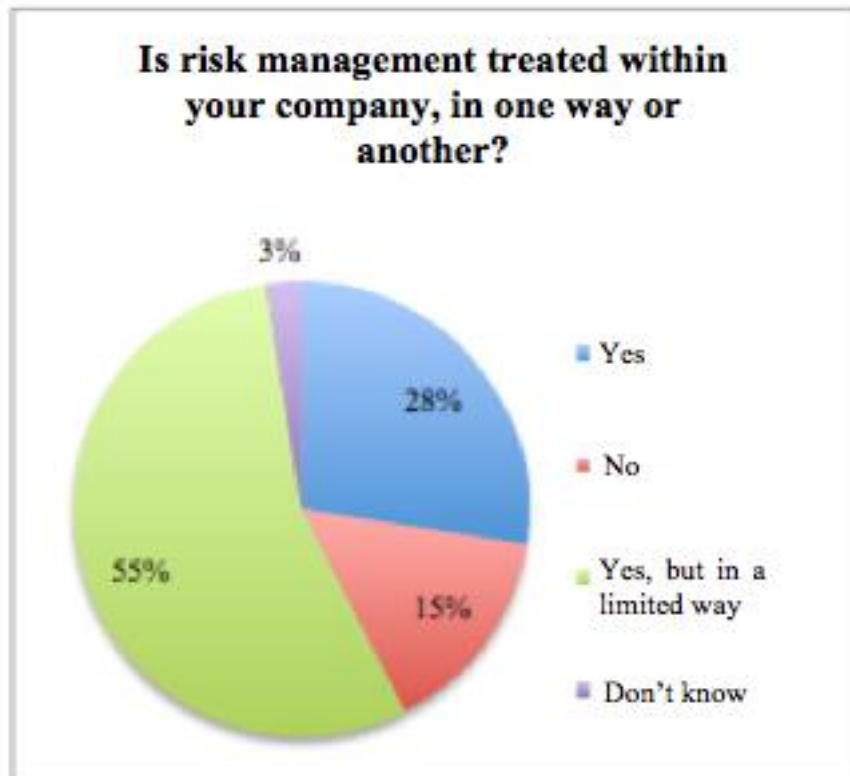
Source: Séminaire - La gestion du risque aux achats, 2013.

	Level	Type of tools	Process							
			Type of risk	Impact	Frequency	Criticality	Risk owner	Action plan	Communication / Diffusion	Follow-up and control
Maturity of integration of the process of the risk management	Informal	To define	Economical	I	F	C=I*F				
		To define	Financial							
		To define	Industrial/Quality							
		To define	Legal							
	Rough	To define	Business							
		To define	Economical							
		To define	Financial							
		To define	Industrial/Quality							
	Outlined	To define	Legal							
		To define	Business							
		To define	Economical							
		To define	Financial							
	Integrated	To define	Industrial/Quality							
		To define	Legal							
		To define	Business							
		To define	Economical							
	Optimised	To define	Financial							
		To define	Industrial/Quality							
		To define	Legal							
		To define	Business							
Level of maturity against the risks	Tools	Identification	Criticality of the risks			Holder of the risk	Treatment and piloting	Integration	Feedback	

APPENDIX 4: Survey SME - What are the brakes met by a purchasing department in a small and medium-sized enterprise.

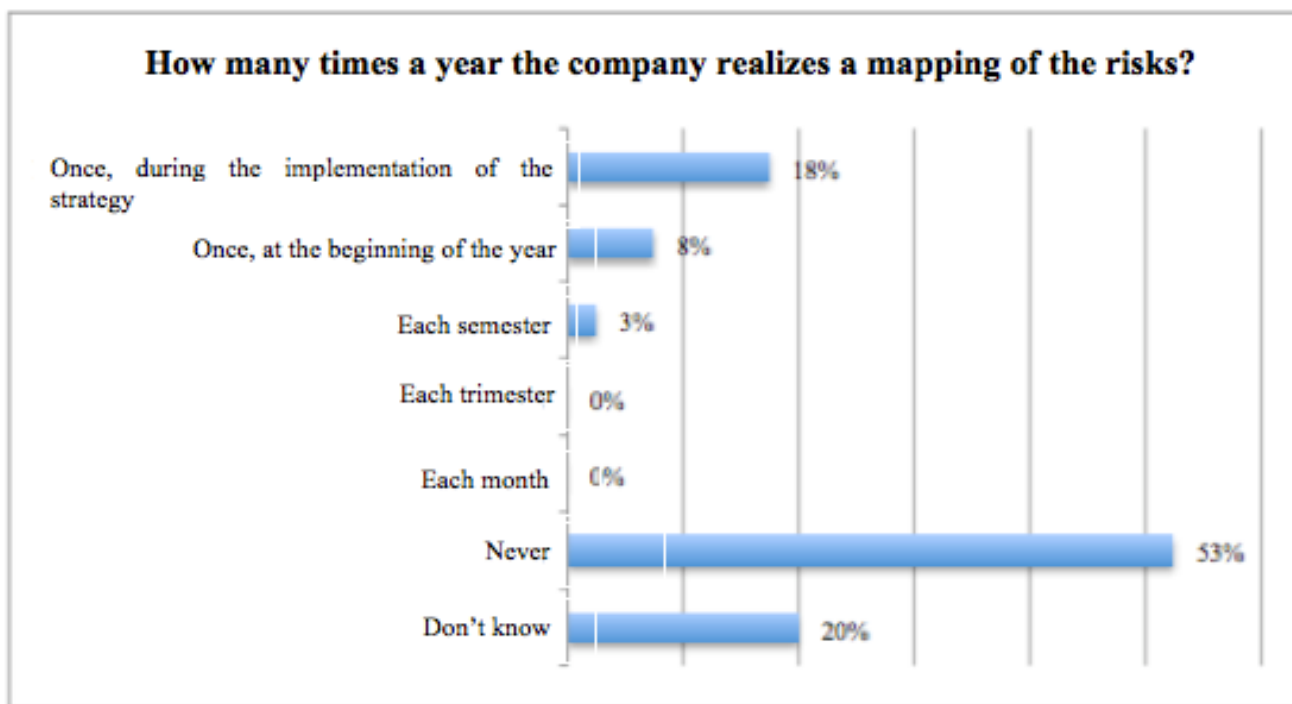
These graphs were realised from an interview done within a purchasing department of a SME. The entire department was interviewed, 6 people, about the risk management in their company.

Question 1: Is risk management treated within your company, in one way or another?



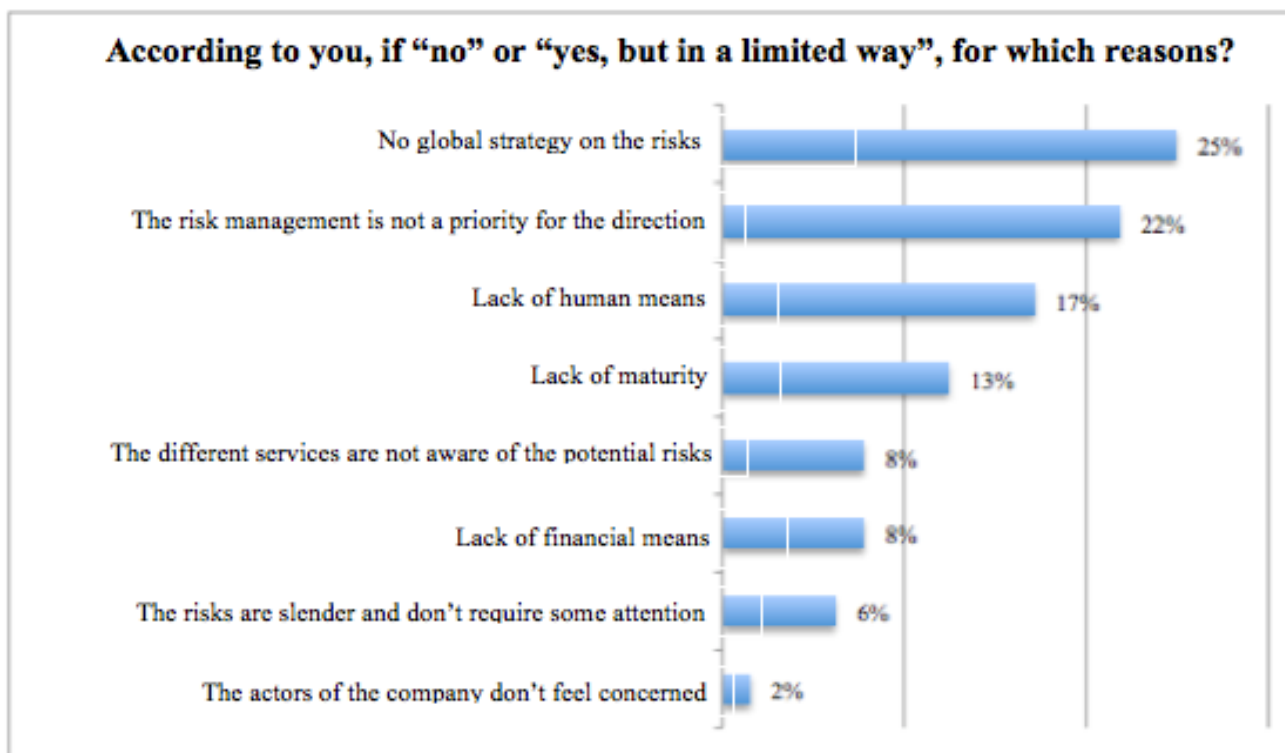
Question 1b: How many times a year the company realizes a mapping of the risks?

Because the mapping of the risks is a big part of the risk management, it is important to know, for the part who answered “yes” or “yes, but in a limited way” to the question 1, if the main approach to forestall the risks is applied in SME.

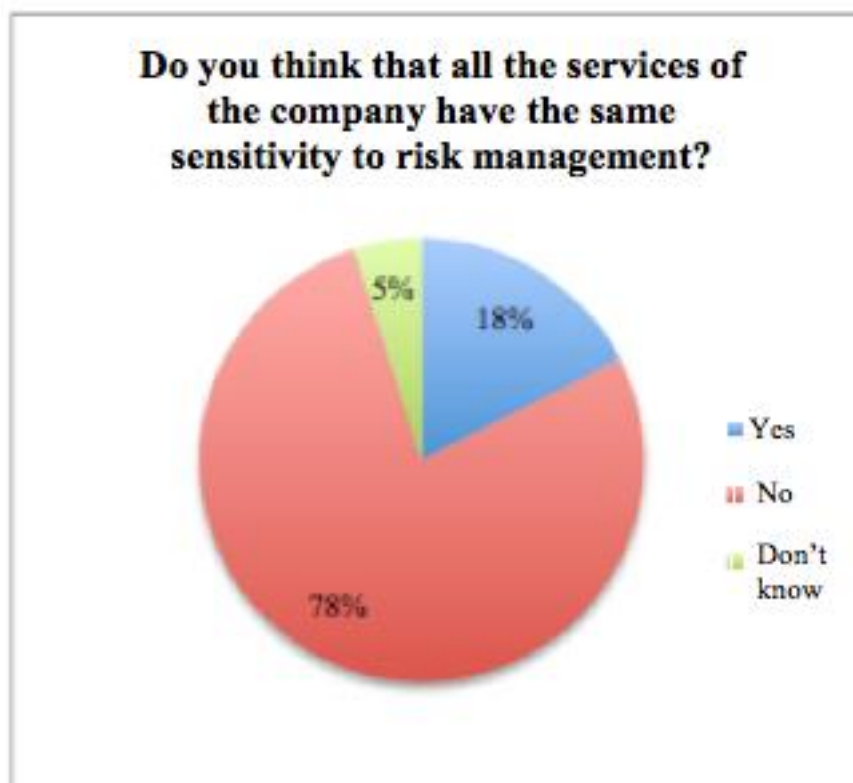


Question 2: According to you, if “no” or “yes, but in a limited way”, for which reasons?

People who answered “no” or “yes, but in a limited way” to the question 1 have to find a reason of this problem.



Question 3: Do you think that all the services of the company have the same sensitivity to risk management?



Question 4: If “no”, which brakes the company meets?

This question is for people who answered “no” to question 3.

